

ME

Number: CALA-130-MB

Date: August 1997

## Introducing CompInfo On Demand

Nortel CALA is pleased to announce the availability of a new competitive information retrieval system, CompInfo On Demand. Provided by Nortel Competitive Analysis, this Fax on Demand service uses Messenger running on the Option 81 at MCS headquarters in Richardson, TX.

Users can access equipment information on Lucent, Siemens Rolm, NEC and Mitel through an easy to use IVR menu and specify a delivery location for their information.

The system will be available using a single PIN number that will be assigned to each distributor. To receive a PIN number please send the following information to Julie Fernández at fax 954-851-8811:

- Contact Name
- Distributor Name
- Distributor Phone Number
- Channel Manager Name
- Channel Manager Phone Number

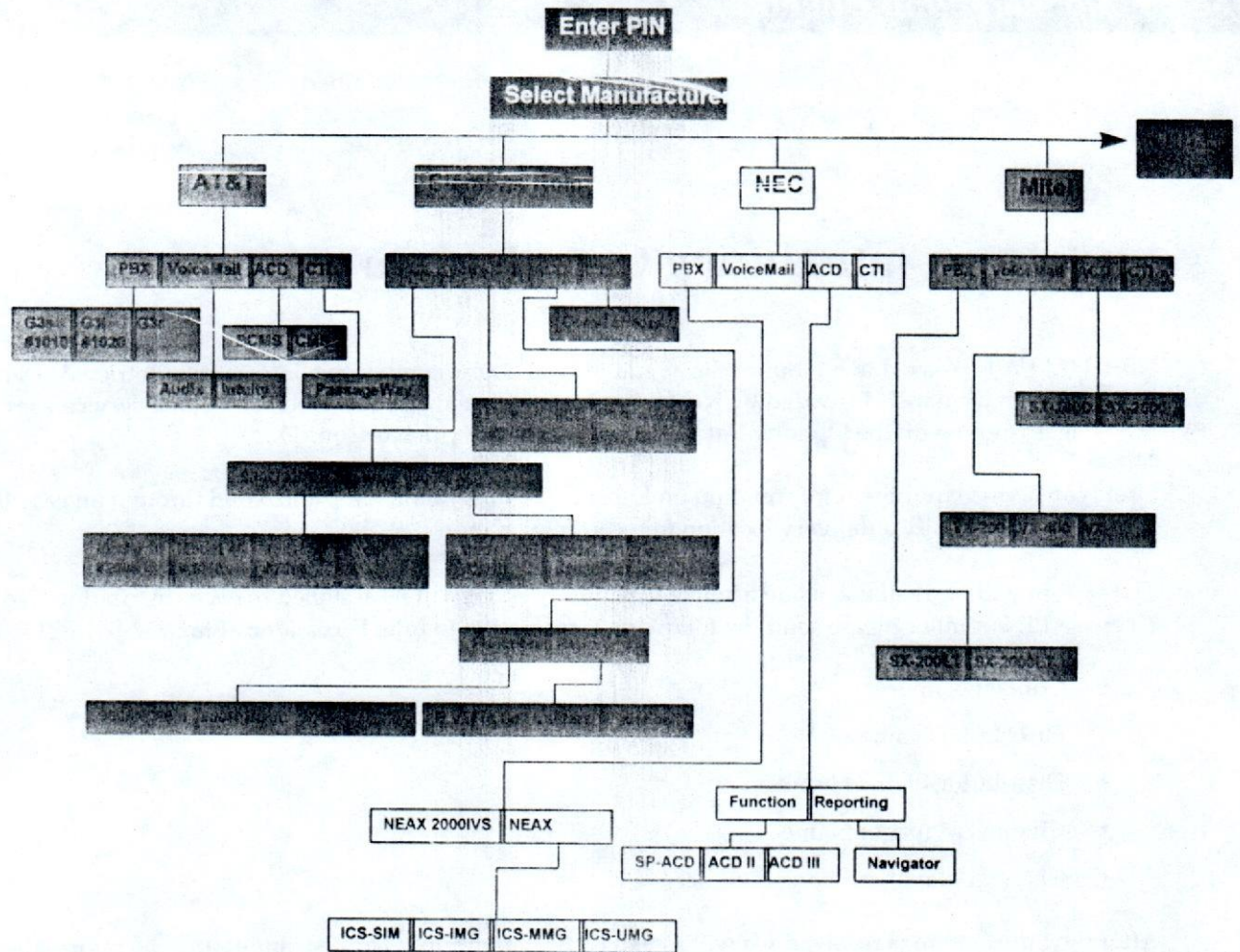
After the information is received we will assign ONE PIN number per distributor and the information will be returned to you.

After receiving the PIN number the services can be accessed following the directions below:

- Call 1-972-684-3058 (For those making an international call please make the call from the fax phone)
- When asked for a mailbox number enter: 263 and then number sign
- When asked for a PIN number enter: your PIN number followed by the number sign
- Follow the prompts

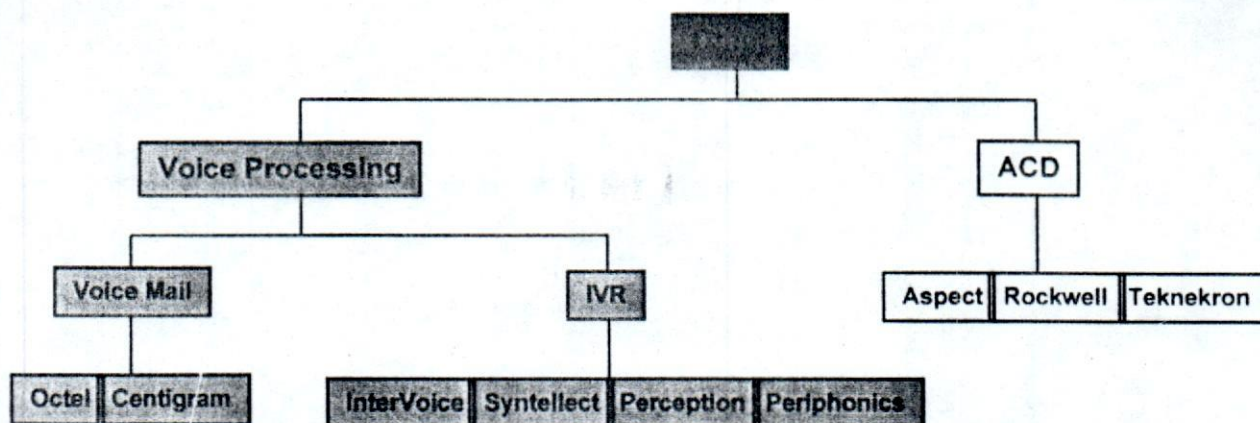
Below is a diagram of the information provided by this service.







## DRAFT VERSION



If you have any questions or comments, please contact:

Lynette V. Rosado  
Marketing Specialist  
Nortel CALA Inc.  
1500 Concord Terrace  
Sunrise, FL 33323  
Tel: 954-851-8063  
Fax: 954-851-8300

Julie Fernández  
CAR/DAC Coordinator  
Nortel CALA Inc.  
1500 Concord Terrace  
Sunrise, FL 33323  
Tel: 954-851-8828  
Fax: 954-851-8811







# Passport model 160

## Flexible, cost-effective, high-performance networking

### Highlights

Nortel's (Northern Telecom's) Magellan Passport is an ATM enterprise network switch which provides:

- consolidation of services including LANs, SNA/APPN, ATM, voice, and video onto a single network
- high-performance frame relay
- ATM access & trunking capability
- sophisticated traffic management
- unmatched network availability
- powerful, flexible network management system

Corporations and organizations are faced with both escalating demands for higher bandwidth and the high cost of maintaining separate networks. In response they are seeking cost-effective ways to consolidate multiple voice, data and video networks, as well as new applications, onto a single, high-performance, multimedia enterprise network. Nortel's powerful Magellan Passport model 160 is the optimal solution.

### The Magellan Passport solution

The Magellan Passport model 160 currently supports the Asynchronous Transfer Mode (ATM) services and network consolidation requirements of customers around the world. Designed to deliver the best features and functionality of routers, packet switches, and muxes, Magellan Passport is a modular, cell-based enterprise switch using ATM technology. It delivers a powerful range of standards-based interfaces and services, provides high-performance multiprotocol routing, and simultaneously supports voice, data, video, and image traffic. Intelligent traffic management capabilities allow organizations to achieve efficient communication and network consolidation for all organizations.

### Unparalleled performance and availability

Delivering high availability, fast response time and 1.6 Gbit/s performance, the Magellan Passport supports the demanding communications needs of today's enterprises. Passport dynamically routes service along the optimal path, allowing faulty or congested links to be bypassed and network efficiency to be maximized. Passport features Magellan's unique Multiple Priority System for dynamic management of different traffic types and the allocation of network resources based on application needs and business priorities. High availability and performance are achieved with features such as hardware redundancy, trunk backup capabilities, and redundant power and processor configurations.

### Flexibility

Optimized with more interface slots than the smaller Passport model 50 switch, the Passport model 160 – with 16 slots available – is ideal for a high-performance enterprise backbone network. Both Passport

switches feature modular, scalable hardware and software services to accommodate a variety of site and size requirements. Passport networks scale easily from a few nodes to thousands of nodes.

### Cost savings

Passport model 160 offers substantial network savings by simplifying the network infrastructure and maximizing bandwidth efficiency. Backbone-level network consolidation leads to significant facilities savings by reducing the number of leased lines required. Capital cost savings are derived from the efficient use of existing equipment and reduced hardware requirements as the network grows.

### Leadership

Passports state-of-the-art technology has gained international recognition through awards from both trade journals and trade organizations – and through the satisfaction of our customers worldwide.

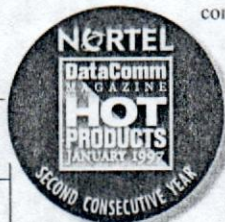
Passport leads the industry with such service offerings as voice over ATM – delivering cost savings and new revenue potential for MICOM customers. Passport frame relay is deployed around the globe and leads the market with switched virtual circuit and broadband UNI capabilities.

### Path to the future

Passport is designed to be compatible with emerging technologies. For example, an ATM service can be added by simply including an ATM interface card and provisioning it with the appropriate software.

### MICOM portfolio of integration products

In addition to Passport, MICOM's product portfolio of integrated access products includes Marathon, V/IP, FrameRunner, Digital Direct Series, STADIA, and NetMan – a comprehensive network management system.



160



# Passport model 160

## Specifications

### InterLAN switching

- network protocols including TCP/IP, Novell IPX
- bridging support including transparent bridging, source route bridging, source route transparent IEEE 802.9, FDDI encapsulation
- routing techniques including RIP, EGP, and OSPF
- security – advanced filtering facility
- RFC 1483 LAN over ATM

### APPN support

- network node
- dependent LU requester (DLUR)
- high-performance routing

### ATM

- high-performance virtual channel and virtual path ATM switching
- ATM trunking
- ATM UNI access (ATM Forum 3.0/3.1 compliant)
- adaptation of all Passport-supported services to ATM
- wide range of ATM physical-layer interfaces
- traffic policing and shaping

### Voice networking protocols

- QSIG – ECMA on E1/DS1
- NIS (North American ISDN)
- CAS (DTMF inband signalling and TTC-2M)

### Voice networking capabilities

- ADPCM compression
- built-in echo cancellation with fax and modem tone detection
- activity detection for speech and fax
- automatic voice/data call discrimination

### Transparent data support

- frame-aligned bit transparent connection
- HDLC transparent connection

### Frame relay

- high-density, high-speed interfaces
- differentiated traffic class management
- switched virtual circuits
- frame relay accounting
- frame relay-ATM interworking

### Trunking

- 9.6 kbit/s to 155 Mbit/s (OC-3c)

### Robust routing

- multiple routing systems are supported simultaneously
- LAN protocols and legacy data use a dynamic packet routing system
- voice and transparent data use a connection-oriented routing system

### Physical interfaces

- V.11 (X.21), V.35
- DS1, E1 channelized and unchannelized
- DS1, E1, TTC-2M voice
- DS3, E3, DS3 channelized
- HSSI
- FDDI
- ethernet, token ring
- DS1, E1 ATM
- DS3, E3 ATM
- OC-3c, STM-1 ATM
- J2 ATM
- combined control, ethernet/token ring and V.11/V.35

### Network management

- SNMP-compliant device management
- Magellan Network Management System
- Magellan OMS-HP OpenView, IBM NetView/AIX, Cabletron Spectrum

### Packaging

- complete shelf (h x w x d) unit  
38.25" x 19" x 21.75"  
972 mm x 483 mm x 553 mm
- cabinet (h x w x d)  
77.5" x 24" x 27.3"  
1969 mm x 610 mm x 693 mm
- mounting options:
  - Nortel supplied cabinet
  - standard 19" EIA rack

### Electrical requirements

- AC and DC models are available with optional redundancy

For additional information on MICOM's services and products, please contact your MICOM representative or the MICOM office listed below:

### World headquarters

MICOM Communications Corp.  
4100 Los Angeles Ave.  
Simi Valley, CA 93063  
phone: 1-805-583-8600  
fax: 1-805-583-1997  
email: info@micom.com

### In the United States or Canada:

#### Toll free number

1-800-642-6687

### In the United States:

|                 |                                           |
|-----------------|-------------------------------------------|
| Fullerton, CA   | ph: 1-714-992-6702<br>fax: 1-714-992-6769 |
| Santa Clara, CA | ph: 1-408-986-0890<br>fax: 1-408-986-0962 |
| Redmond, WA     | ph: 1-206-836-4144<br>fax: 1-206-836-4083 |
| Irving, TX      | ph: 1-972-650-9000<br>fax: 1-972-650-0731 |
| Naperville, IL  | ph: 1-630-717-2999<br>fax: 1-630-717-9432 |
| St. Louis, MO   | ph: 1-314-966-5353<br>fax: 1-314-966-5118 |
| Aurora, CO      | ph: 1-303-743-7950<br>fax: 1-303-369-8803 |
| Providence, RI  | ph: 1-401-621-1370<br>fax: 1-401-621-1372 |
| Hackensack, NJ  | ph: 1-201-342-5110<br>fax: 1-201-342-8443 |
| Troy, MI        | ph: 1-810-680-4648<br>fax: 1-810-524-2373 |
| Atlanta, GA     | ph: 1-770-435-2999<br>fax: 1-770-435-0663 |

### Web site:

<http://www.micom.com>

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**NORTEL**  
NORTHERN TELECOM



# Passport model 50

## Cost-effective, high-performance networking in a compact package

### Highlights

Nortel's (Northern Telecom's) Magellan Passport is an ATM enterprise network switch which provides:

- consolidation of services including LANs, SNA/APPN, ATM, voice, and video onto a single network
- high-performance frame relay
- ATM access & trunking capability
- sophisticated traffic management
- unmatched network availability
- powerful, flexible network management system

Facing increasing traffic demands and the high cost of networking, businesses need a cost-effective, high-performance solution for their small-to-medium size locations. These sites – while small – require a comprehensive set of services and interfaces consolidated into a single network. They require a solution that offers dynamic bandwidth management to meet today's

multimedia needs – a more flexible and cost-effective solution than traditional TDM muxes. Nortel's Magellan Passport model 50 is the ideal solution.

### The Magellan Passport solution

Nortel's Passport model 50 currently supports the ATM services and network consolidation requirements of customers around the world. It is a modular, cell-based switch that provides cost-effective, high-performance networking in a compact package. The fully featured Passport model 50 brings unmatched availability and the power of enterprise networking to locations where a small number of interfaces are required.

Passport delivers the right balance of price and performance – backed by built-in reliability, manageability, and investment protection.

### Flexibility

The modular design of the Passport model 50 shares the hardware and software architecture of the larger Passport model 160. Suitable for corporate networks, the Passport model 50 can meet varied customer requirements. Compact in size with five slots and a 1.6 Gbit/s backplane, it has the flexibility and high-performance of the larger model 160. Passport provides a wide mix of standards-based interfaces and services, and also supports multi-protocol routing with simultaneous support for voice, data, video and image traffic.

Passport uses Magellan's Multiple Priority System, which provides priority, loss and delay parameters to closely align communications capabilities with application needs and business priorities. Bandwidth is dynamically allocated to all active applications based on these parameters to effectively maintain the

quality and performance of sensitive traffic such as voice and video while maximizing network bandwidth efficiency. Passport networks scale easily from a few nodes to thousands of nodes.

### Cost savings

The combination of the Multiple Priority System with sophisticated traffic management capabilities delivers reduced networking costs for Passport users. Independent applications networks are consolidated into one physical, and many logical, networks – each with unique and tailored control and performance attributes. The Passport model 50 also provides statistics and accounting information for encouraging efficient use of the corporate network.

### Leadership

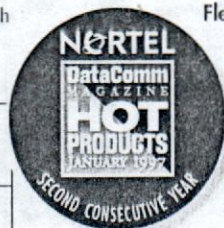
Passport's state-of-the-art ATM technology has gained international recognition through awards from both trade journals and trade organizations – and through the satisfaction of our enterprise customers worldwide.

Passport leads the industry with such service offerings as voice over ATM – delivering cost savings and new revenue potential for MICOM customers. Passport frame relay is deployed around the globe and leads the market with switched virtual circuit and broadband UNI capabilities.

Passport's full range of services and interfaces are available today and thousands of Passport switches have been deployed worldwide.

### MICOM portfolio of integration products

In addition to Passport, MICOM's product portfolio of integrated access products includes Marathon, V/IP, FrameRunner, Digital Direct Series, STADIA, and NetMan – a comprehensive network management system.



50



# Passport model 50

## Specifications

### InterLAN switching

- network protocols including TCP/IP, Novell IPX
- bridging support including transparent bridging, source route bridging, source route transparent IEEE 802.9, FDDI encapsulation
- routing techniques including RIP, EGP, and OSPF
- security – advanced filtering facility
- RFC 1483 LAN over ATM

### APPN support

- network node
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- HDLC transparent connection

### Frame relay

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- differentiated traffic class management
- switched virtual circuits
- frame relay accounting
- frame relay-ATM interworking

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- DS1, E1 channelized and unchannelized
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- DS3, E3, DS3 channelized
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- DS1, E1 ATM
- DS3, E3 ATM
- OC-3c, STM-1 ATM
- J2 ATM
- combined control, ethernet/token ring and V.11/V.35

### Network management

- SNMP-compliant device management
- Magellan Network Management System
- Magellan OMS-HP OpenView, IBM NetView/AIX, Cabletron Spectrum

### Packaging

- size (h x w x d) 17.5" x 10.5" x 22.0"  
445 mm x 267 mm x 559 mm
- mounting options:
  - Nortel supplied cabinet
  - standard 19" EIA rack

### Electrical requirements

- AC and DC models are available with optional redundancy

For additional information on MICOM's services and products, please contact your MICOM representative or the MICOM office listed below:

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4100 Los Angeles Ave.  
Simi Valley, CA 93063  
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email: info@micom.com

*In the United States or Canada:*

**Toll free number**  
1-800-642-6687

*In the United States:*

|                 |                                           |
|-----------------|-------------------------------------------|
| Fullerton, CA   | ph: 1-714-992-6702<br>fax: 1-714-992-6769 |
| Santa Clara, CA | ph: 1-408-986-0890<br>fax: 1-408-986-0962 |
| Redmond, WA     | ph: 1-206-836-4144<br>fax: 1-206-836-4083 |
| Irving, TX      | ph: 1-972-650-9000<br>fax: 1-972-650-0731 |
| Naperville, IL  | ph: 1-630-717-2999<br>fax: 1-630-717-9432 |
| St. Louis, MO   | ph: 1-314-966-5353<br>fax: 1-314-966-5118 |
| Aurora, CO      | ph: 1-303-743-7950<br>fax: 1-303-369-8803 |
| Providence, RI  | ph: 1-401-621-1370<br>fax: 1-401-621-1372 |
| Hackensack, NJ  | ph: 1-201-342-5110<br>fax: 1-201-342-8443 |
| Troy, MI        | ph: 1-810-680-4648<br>fax: 1-810-524-2373 |
| Atlanta, GA     | ph: 1-770-435-2999<br>fax: 1-770-435-0663 |

### Web site:

<http://www.micom.com>

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**NORTEL**  
NORTHERN TELECOM



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**NORTEL**  
NORTHERN TELECOM**Sales and Marketing Bulletin**

Number: CALA-123-MB

Date: May 1997

## Nortel's Multimedia Conferencing Desktop Video H.320

Nortel CALA is pleased to announce the availability of *Nortel's Multimedia Conferencing* desktop video product. This product is not just another version of desktop video, but a *next generation* product. It is H.320 compliant and provides true Applications Sharing as well as the traditional Whiteboard (formerly ScreenShare) and File Transfer applications. H.320 is an international video standard, and thus provides interoperability with any vendor's product that supports this standard.

### Nortel's Multimedia Conferencing

*Nortel's Multimedia Conferencing* product enhances productivity and provides easy collaboration with colleagues, vendors, clients, and others thus diminishing the need to travel across town or across country. The product provides the following features:

- **Call Manager** – Screen based telephony that allows control of your Nortel telephone set from your computer screen. Includes electronic directory, call logging, and a graphical interface to your voice mail system.
- **Video** – ITU H.320 compliant video at 15 frames per second (fps) in CIF (Common Intermediate Format) mode or up to 30fps QCIF (Quarter CIF). A scaleable video window provides various size windows up to full screen.
- **Whiteboard Application** – Provides a shared electronic workspace for annotating, brainstorming, graphic collaboration, etc.
- **Applications Sharing** – Shares any file, and its application, with a remote user for joint creation, reviewing, or editing of data.
- **File Transfer** – Easily send one or more files in one simple operation. Especially advantageous for sending large files such as graphic images, databases, or presentations.
- **External TV** – A direct connection to an external TV to free real estate on your computer monitor or for viewing in a conference room environment.
- **Physical Whiteboard** – An interfaces to Smart Technologies' variety of whiteboard products to provide easy collaboration in a room environment.







The minimum requirements for the PC computer used as the platform of *Nortel's Multimedia Conferencing* are as follows (for a more detailed description of this product's features, please refer to *Attachment A* at the end of this document):

- 486 Processor @ 50Mhz
- 12Mb RAM Memory Minimum; 16Mb Recommended
- Video monitor that supports 256 colors
- Available ISA slot (second slot may be required for SVGA card)
- DOS 5.0 or higher, Windows 3.1, Windows for Workgroups, or Windows 95

## Product Connectivity

*Nortel's Multimedia Conferencing* uses an ISDN Basic Rate line to provide 128Kb of video conferencing capability. As shown in Figure 1, this connectivity can be obtained in two ways if behind Nortel's Meridian 1, or a third option if not connected directly to the Meridian 1.

**Connectivity Option 1:** The ULC Line card provides a U-Loop interface to the desktop that must terminate on a NT-1. Since the video board includes a built-in ISDN Terminal Adapter, no other device is required.

**Connectivity Option 2:** The Meridian 1 can also provide a BRI connection via a SILC card, which brings a S/T Bus connection to the desktop. Because of the built-in terminal adapter, an S/T connection can be connected directly to our video conferencing board without the need for an NT-1.

**Connectivity Option 3:** If not behind a Meridian 1, an ISDN BRI connection can be brought directly to the desktop (see Figure 1) and terminated on the NT-1.

## ISDN Connectivity for Nortel Multimedia Conferencing

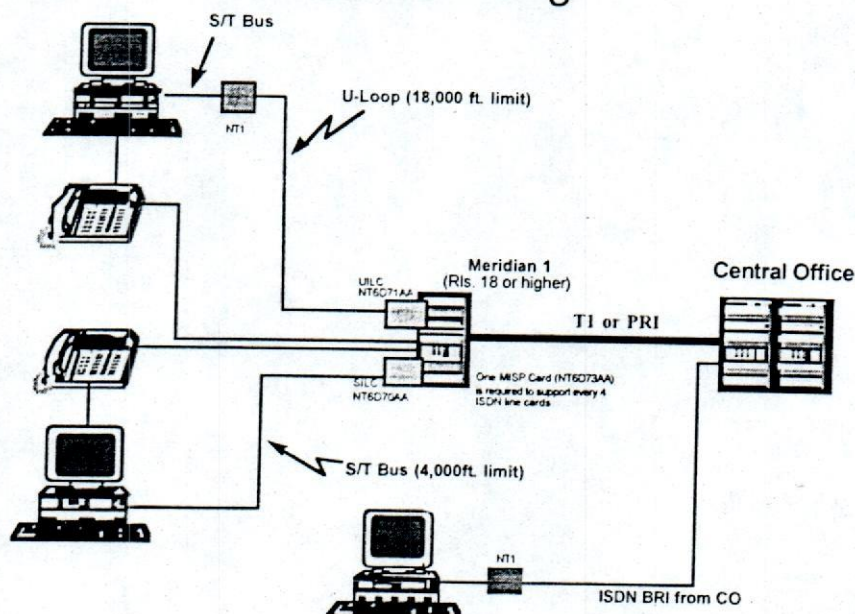


Figure 1: ISDN BRI Connection on M1 or from Central Office







For SL-100 ISDN BRI connectivity, the following options are available:

## ISDN on SL-100

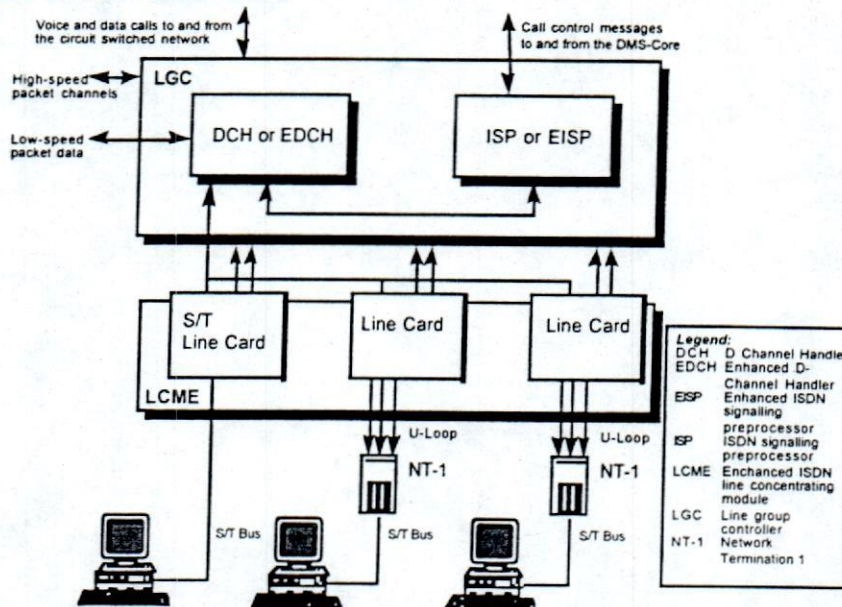


Figure 2: ISDN BRI Connection on SL-100







## Training

A formal class is available to provide training on our newest product. The class is entitled "VISIT Sales Training" and is class number 162. For registration and/or information about this class, call the Technical Training Center at 800-775-6835.

## Ordering Procedures

1. Orders must be placed using one of above defined codes.
2. To place orders, fax a purchase order with the product codes to Nortel CALA's Order Desk, attn. Sonia Ramirez:

Fax Caribbean: (954) 851-8635

Fax Latin America: (954) 851-8050

Called-in orders must be supported by a confirming copy of the purchase order forwarded to the Nortel CALA Order Desk. Copies sent via facsimile will be considered formal copies of confirming purchase orders. Orders may be sent via mail to:

Nortel CALA Inc.  
1500 Concord Terrace  
Sunrise, FL 33323-2815  
Attn.: Sonia Ramirez  
Mail Stop: A0511M

Meridian 1 and SL-1 are trademarks of Northern Telecom.







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## Attachment A: Product Details Document

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### NORTEL MULTIMEDIA CONFERENCING PRODUCT DETAILS

Nortel's Multimedia Conferencing is an evolutionary step in Northern Telecom's desktop video portfolio. It's the next generation in our video conferencing product family. It is fully compliant with the ITU H.320 video conferencing standard and therefore is interoperable with other vendor's video products that support this widely used standard.

The new Multimedia Conferencing also includes Call Manager, which provides screen based telephony for Northern Telecom customers.

The following is a summary of the main features of Nortel's Multimedia Conferencing product.

#### Call Manager

Call Manager has features that allow it to be used as a Personal Information Manager (PIM). Some of its features include:

- **Directory** – The new directory structure conforms to the ODBC database standard thus providing all the features of a database application. It allows the user to define categories to assign directory entries thus providing the capability to easily filter your directory and see only the entries for a particular category. The new directory provides for recording addresses, various voice, data, and fax phone numbers, as well as a free form memo field for recording personal information.
- **Auto Memo Pop-Up** – Whenever memo information is attached to a directory entry, the memo can automatically pop up on the screen (an optional selection) whenever calling that person or receiving a call from that person. It's a quick reminder of what the call content should include.
- **Call Management** – Make and receive calls, transfer calls, etc., all through mouse and/or keyboard commands on the PC screen without ever having to touch your telephone.
- **Call Logs** – Access a visual display of all calls made and received. Call logs can be used to place return calls through on-screen commands.
- **Voice Mail Management** – Access and use a voice mail system with point-and-click simplicity. Make maximum use of voice messaging system features. Can be customized by the user to work with most all voice mails utilized with a Nortel PBX.
- **Dialing Plans** – Easily adapt office dialing plans to dialing plans for home, hotel or other company locations without having to modify the directories.







## Multimedia Conferencing Features

The key features of Multimedia Conferencing are:

- **H.320 Video Conferencing** – High quality video conferencing that complies with the H.320 video conferencing standard at either CIF (Common Intermediate Format) or QCIF (Quarter CIF) formats. It includes a scaleable video window, a secondary video input, a headset for private video conferencing, or a specially designed speaker/microphone option for high quality handsfree audio. It also features the ability to connect a standard TV to the video board thus allowing the video window to be moved to the TV, freeing your valuable computer monitor real estate for data collaboration. Since it is H.320 compatible, it is interoperable with any video conference system that supports the standard.
- **Whiteboard** – Provides a shared work space during a video conference for brainstorming, creating or editing drawings, data collaboration, giving presentations or annotating documents. Shared graphic tools provide for easy collaboration between participants.
- **Applications Sharing** – Allows users to have true file editing capabilities by sharing a users application. A user can share a spreadsheet, for example, with another colleague even though the colleague uses a different spreadsheet application than used to create the spreadsheet. Share a word document with a client even if he does not use the same word processing application that you use. Provides for effective data sharing across distances.
- **File Transfer** – Users can send and receive one or more files quicker than with other dial-up connectivity options, such as standard analog modems. Faster transmission tools are paramount to users, especially those who work with graphic—or image—intensive material. A visual status window is provided to monitor key file transfer information, progress of the transmission and when the transfer is successfully completed.

## Connectivity

Nortel's Multimedia Conferencing utilizes ISDN Basic Rate digital lines for communicating with other video conferencing systems. Using 128Kb of bandwidth, it provides superior video picture and audio quality. In the third quarter of 1996, convenient connections behind Nortel's Meridian 1 and SL-100 PBXs, and the Norstar Key System will be provided by the Communicator Card. This card is inserted into the users computer and provides the ability to utilize the standard digital lines associated with Northern Telecom phone systems for video conferencing. This ability eliminates the need to bring ISDN connections to every desktop or upgrade your switch to support ISDN BRI lines to the desktop.

## Availability

Nortel's Multimedia Conferencing is available in several packages. The Baseline package will include a headset along with the board, camera, and software. Additional packages will provide hands free audio and/or connectivity support. Product availability is immediate.







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## Attachment B: Site Survey

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Northern Telecom  
Meridian Communications Systems

### Multimedia Conferencing Site Survey

This Site Survey is **critical** to the success of your Multimedia Conferencing installation. Please complete ALL questions and get the requested signatures. This will help the team, whether from your own company or from Nortel, to make the installation go right from the start. This survey includes the computer and ISDN line requirements to prepare your office before the installation, helps you identify key people who may help with the installation, and brings other important aspects of the installation to your attention ahead of time. If you have further questions before the installation, please call the person who gave you this survey or call the CALA CTAS Help Line at (954) 851-8700.







## Multimedia Conferencing Site Survey

### Install Site Information:

Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Zip: \_\_\_\_\_  
Install Prime: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Requested Install Date: \_\_\_\_\_  
Number of units to be installed at this site: \_\_\_\_\_

### ISDN Information

#### ISDN Provisioning Requirements:

|                                      |                                                                                                                                  |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 1. Terminal Type?                    | Northern Telecom DMS-100: terminal type is not needed.<br>AT&T 5ESS: terminal type is A.<br>National ISDN-1: terminal type is A. |
| 2. Circuit Switched Voice - 0, 1, 2? | Need to be able to do voice or data on either channel.                                                                           |
| 3. Circuit Switched Voice - Chan.?   | Need to be able to do voice or data on either channel.                                                                           |
| 4. Circuit Switched Data - 0, 1, 2?  | Need to be able to do voice or data on either channel.                                                                           |
| 5. Circuit Switched Data - Chan.?    | Need to be able to do voice or data on either channel.                                                                           |
| 6. Custom or National ISDN?          | We will take either but will choose National ISDN-1.                                                                             |
| 7. 1 or 2 SPIDs?                     | 2 SPIDS (This tells the switch which digit follows the telephone number.)                                                        |
| 8. Long distance carrier (PIC)?      | One capable of point-to-point ISDN.                                                                                              |

**NOTE:** Your ISDN lines must be installed and ready to use for a successful installation of Multimedia Conferencing.







1. Which type of ISDN switch, and what revision, provides your ISDN service?

US NI-1 \_\_\_\_\_ (any brand providing true NI-1 standard, incl. M1)

NT DMS-100, Pre NI-1 \_\_\_\_\_ (Revision \_\_\_\_\_)

NTT INSnet64 \_\_\_\_\_ (Japan)

ETSI ISDN Net 3 \_\_\_\_\_ (European standard)

AT&T 5ESS, Fully initializing \_\_\_\_\_

AT&T 5ESS, Non initializing \_\_\_\_\_

2. Give a contact name and phone number at your local phone company who provides you with and knows about ISDN service to your company.

Local Phone Co. Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Contact Number: \_\_\_\_\_

Is there a person within your company with intimate knowledge of your switch?

If yes, please list their name and phone number: \_\_\_\_\_

3. Your long distance carrier will need to know to route all your Multimedia Conferencing calls through strictly digital routes, preferably 64K instead of 56K. Which long-distance carrier is assigned for your ISDN line?

AT&T: \_\_\_\_\_

MCI: \_\_\_\_\_

Sprint: \_\_\_\_\_

Other: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Contact Number: \_\_\_\_\_

4. Have you confirmed with your long-distance carrier that they will provide complete ISDN long-distance connectivity? Yes \_\_\_\_\_ No \_\_\_\_\_

5. Please list the following information about your ISDN lines. Your site should have one ISDN line (BRI: 2B, 1D) for each Multimedia Conferencing unit. The following information should be given to you by the phone company or person who installed and configured your ISDN line(s).

*For Multimedia Conferencing Unit A:*

Service Profile Identifier (SPID) 1: \_\_\_\_\_

Service Profile Identifier (SPID) 2: \_\_\_\_\_

Directory Number 1 (DN): \_\_\_\_\_

Directory Number 2 (DN): \_\_\_\_\_

*For Multimedia Conferencing Unit B*

Service Profile Identifier (SPID) 1: \_\_\_\_\_

Service Profile Identifier (SPID) 2: \_\_\_\_\_

Directory Number 1 (DN): \_\_\_\_\_

Directory Number 2 (DN): \_\_\_\_\_

Please write information about additional ISDN lines on the back of this page.







6. Does the provisioning of your ISDN lines meet the requirements at the beginning of this section?  
Yes \_\_\_\_\_ No \_\_\_\_\_
7. If your ISDN is provided as a U-loop you will need to use an NT1 terminal device.  
If your ISDN is provided as an S/T-loop you do not need an NT1 terminal device.  
Do you already have an NT-1 unit for each MMC kit? Yes \_\_\_\_ No \_\_\_\_ N/A \_\_\_\_  
If yes, what brand and model? \_\_\_\_\_  
If no, did you order an NT1 with your MMC kit? Yes \_\_\_\_ No \_\_\_\_







## Computer Requirements

### PC Requirements:

- IBM-compatible computer with Windows supported mouse
- 486 50MHz or greater
- Microsoft Windows 3.1, Windows for Workgroups 3.11, or Windows 95
- DOS 5.0 or greater
- SVGA monitor capable of at least 640 X 480 Resolution - 256 or more colors
- 16MB RAM is recommended (especially if Windows 95), minimum is 12MB RAM
- Conventional/Lower memory required is 520K to 550K
- Two available ISA/EISA slots, at least one of them full-length
- Hard Disk (with at least 30MB free disk space)
- One available IRQ setting (10, 11, 12 or 15) and I/O address (200, 220, 240, 280, 300, 320, 340 or 380)
- CD-ROM on board or access to another computer with CD-ROM ability

Use the requirements list above when completing this section.

1. What is the make and model of PC being used: \_\_\_\_\_
2. Multimedia Conferencing (MMC) requires the use of two ISA or EISA bus slots (one full length) in order to install the MMC board and VGA controller card.
  - a. Does your computer have two available ISA slots? Yes \_\_\_\_\_ No \_\_\_\_\_
  - b. What kind of interface is in this PC? ISA \_\_\_\_\_ EISA \_\_\_\_\_
3. Random Access Memory (RAM) requirements: Windows 3.1 PCs must be running a minimum of 12MB of RAM. Windows 95 PCs must be running 16MB.
  - a. Amount of RAM in this PC: \_\_\_\_\_
  - b. Amount of Conventional/Lower memory available (520K to 550K) \_\_\_\_\_
4. Multimedia Conferencing requires having an IRQ and an I/O address (see above list). Which ones are available on your computer?  
IRQ \_\_\_\_\_ (ISA \_\_\_\_\_ or EISA \_\_\_\_\_)  
I/O Port Address \_\_\_\_\_
5. What version of DOS is your PC running? \_\_\_\_\_
6. Which Windows platform will you be using with Multimedia Conferencing?  
\_\_\_\_\_  
(NOTE: Windows NT and OS/2 are currently not supported.)
7. It is usually necessary to have Windows diskettes, configuration diskettes, video driver software, and PC configuration information available during install of Multimedia Conferencing. Do you have access to these disks? Yes \_\_\_\_\_ No \_\_\_\_\_



1. The first part of the report deals with the general situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

2. The second part of the report deals with the financial situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

3. The third part of the report deals with the social situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

4. The fourth part of the report deals with the educational situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

5. The fifth part of the report deals with the health situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

6. The sixth part of the report deals with the agricultural situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

7. The seventh part of the report deals with the industrial situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

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9. The ninth part of the report deals with the legal situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

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11. The eleventh part of the report deals with the military situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

12. The twelfth part of the report deals with the foreign relations of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

13. The thirteenth part of the report deals with the internal security of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

14. The fourteenth part of the report deals with the public works of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.

15. The fifteenth part of the report deals with the general situation of the country and the progress of the work during the year. It also mentions the results of the various committees and the work of the different departments.



## Telephony Requirements

**NOTE:** You do NOT need a telephone to use Multimedia Conferencing because the video conferencing has in-band audio that comes through on a headset or speaker included with your kit.

Multimedia Conferencing has the ability, if you wish to use it, to provide TAPI-based telephone control for making point-and-dial phone calls, keeping a phone call log, and on-screen voice mail interface. Your kit includes the software to do this already if you have the following hardware:

1. Will you be using Multimedia Conferencing's telephony control? Yes\_\_\_ No\_\_\_  
If no, skip to next section.
2. If yes, which of the following combinations of phone/interface device do you have?

The following phones/interfaces are supported by software that comes with your Multimedia Conferencing kit:

- \_\_\_ M2006, M2008, M2216ACD, M2616 / with MCA or MPDA interface
- \_\_\_ M2009, M2018, M2112, M2317 / with TelAdaptor interface
- \_\_\_ M5009, M5112, M5209, M5212, M5312 / with VISIT Interface Unit
- \_\_\_ Analog phone / with Hayes-compatible modem

3. If yes, you must have an available serial port on your PC. Do you? Yes\_\_\_ No\_\_\_
4. You must have a serial cable that will fit your serial port and the interface device.  
Do you? Yes \_\_\_ No \_\_\_

## Power Requirements

The following power requirements are in addition to those required by your computer.

1. All voltage requirements are 120vac, 15amp with grounded outlet (3 prongs).  
You need one outlet each for the NT1, the camera, the Call Port (speaker), and any telephony interface device. Note that some of these devices have a wall mount power adapter block so their plug mechanism is larger than a standard plug.  
Do you have sufficient outlets for your configuration? Yes\_\_\_ No\_\_\_



The following information is being furnished to you for your information only. It is not intended to be used for any other purpose.

The information contained herein is confidential and is not to be disclosed to the public. It is to be used only for the purpose for which it was furnished.

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## Lighting Guidelines

Adequate levels of light are required for good video quality. Shadows and darkness are interpreted as motion by the camera and therefore can cause the digitization algorithm used by the system to work harder, retransmitting more of the picture and can cause a tiling effect in the received picture or transmitted picture. Video cameras should not be exposed directly to unshielded incandescent bulbs or bare fluorescent tubes. Non directional gratings should be used to reduce glare. Extremely bright background lighting from behind video participants should be eliminated (i.e. bright light from window, etc.) because it can cause your face to be completely dark in contrast to the bright light. In some cases to improve video it may be necessary to provide fill lighting to remove excessive shadows and to improve color rendition.

Has the lighting at your location been observed to comply with the above suggestions for good lighting conditions? Yes \_\_\_\_\_ No \_\_\_\_\_

## Key People

Before Multimedia Conferencing is installed, it's a good idea to make the following people aware of the upcoming installation, both to enlist their support and to get them to review the above survey for accuracy. Their signatures here will help ensure a smooth installation.

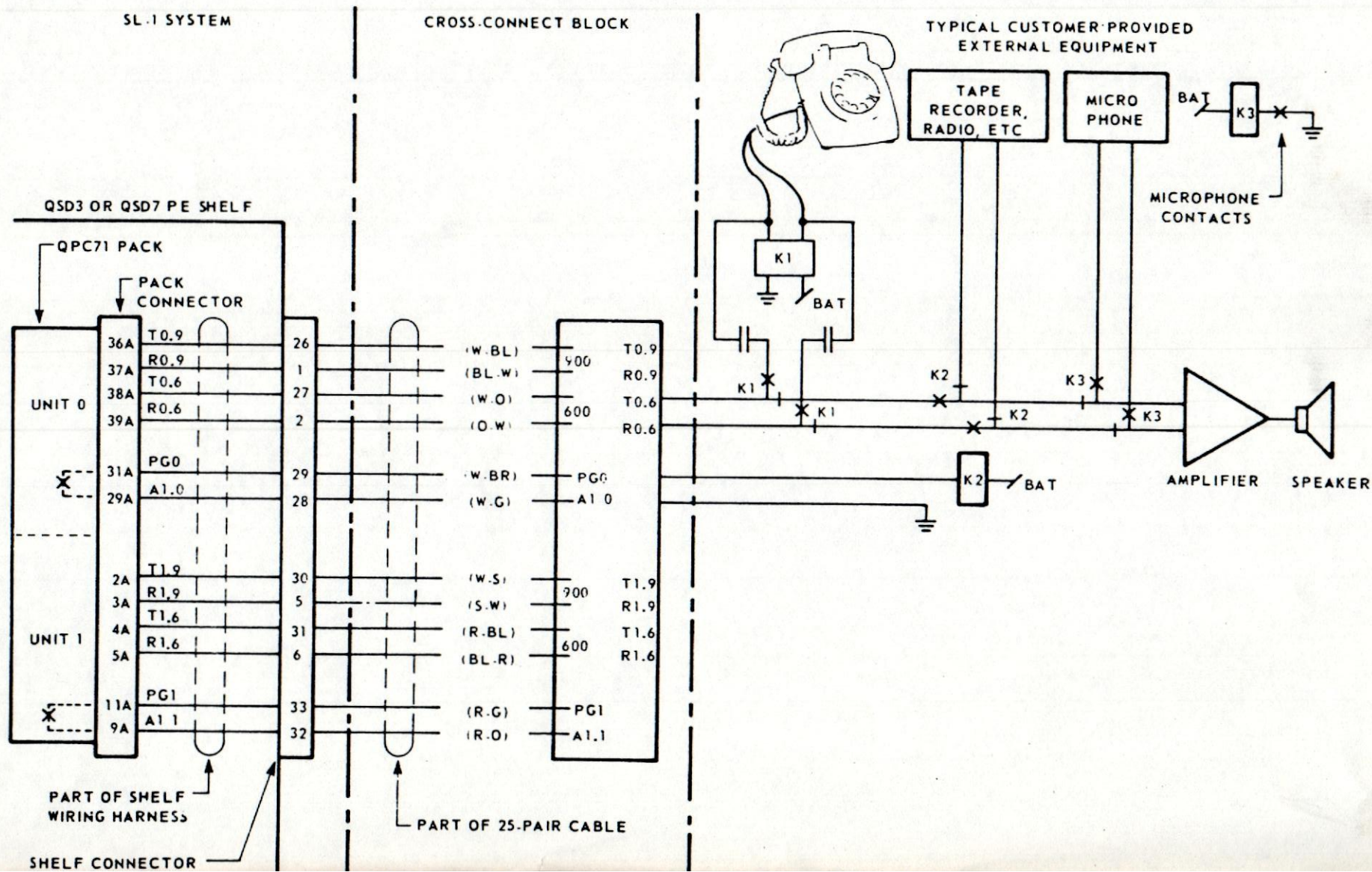
Computer Support: Name: \_\_\_\_\_ Tel: \_\_\_\_\_  
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Switch Provider: Name: \_\_\_\_\_ Tel: \_\_\_\_\_  
End User: Name: \_\_\_\_\_ Tel: \_\_\_\_\_



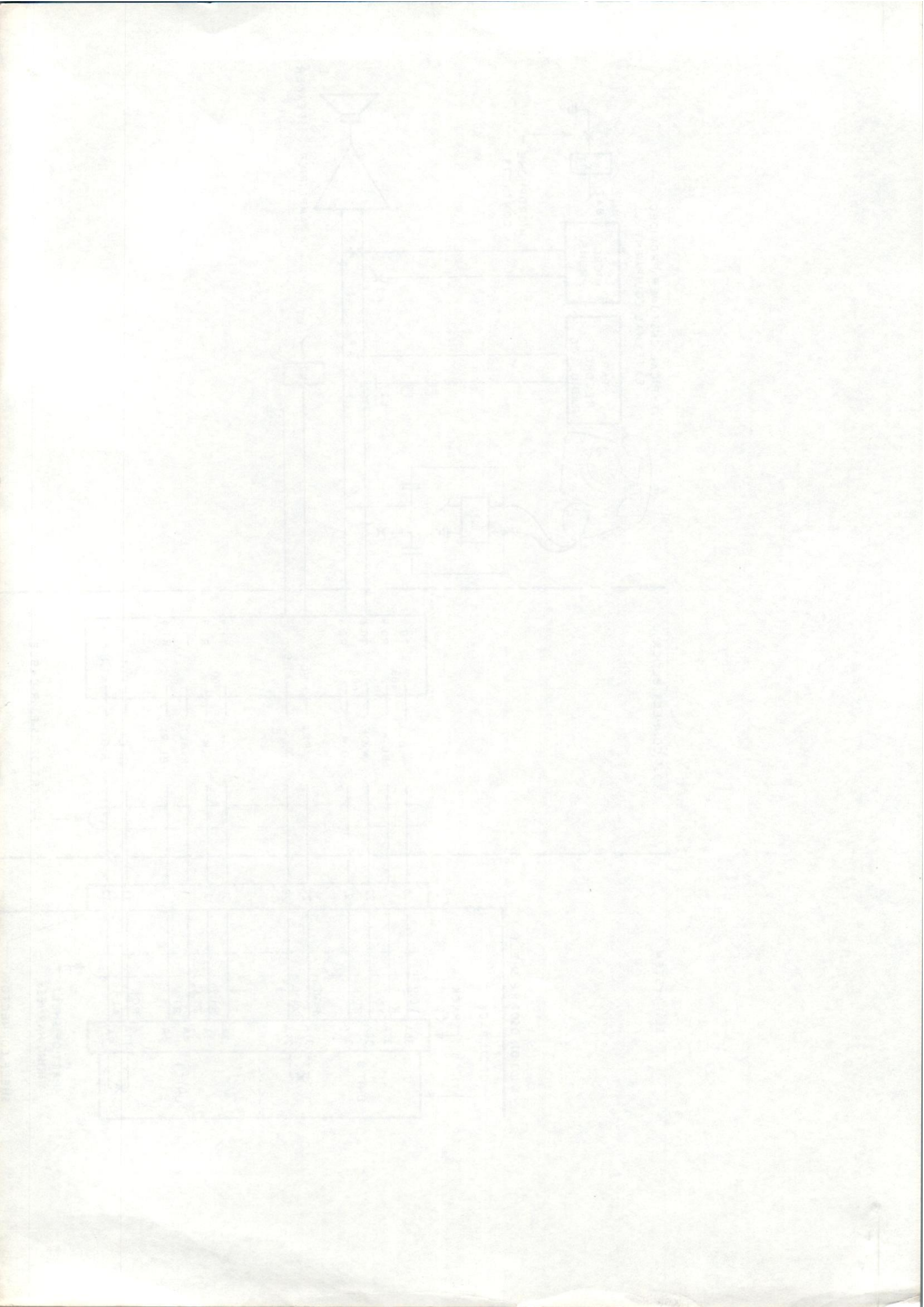
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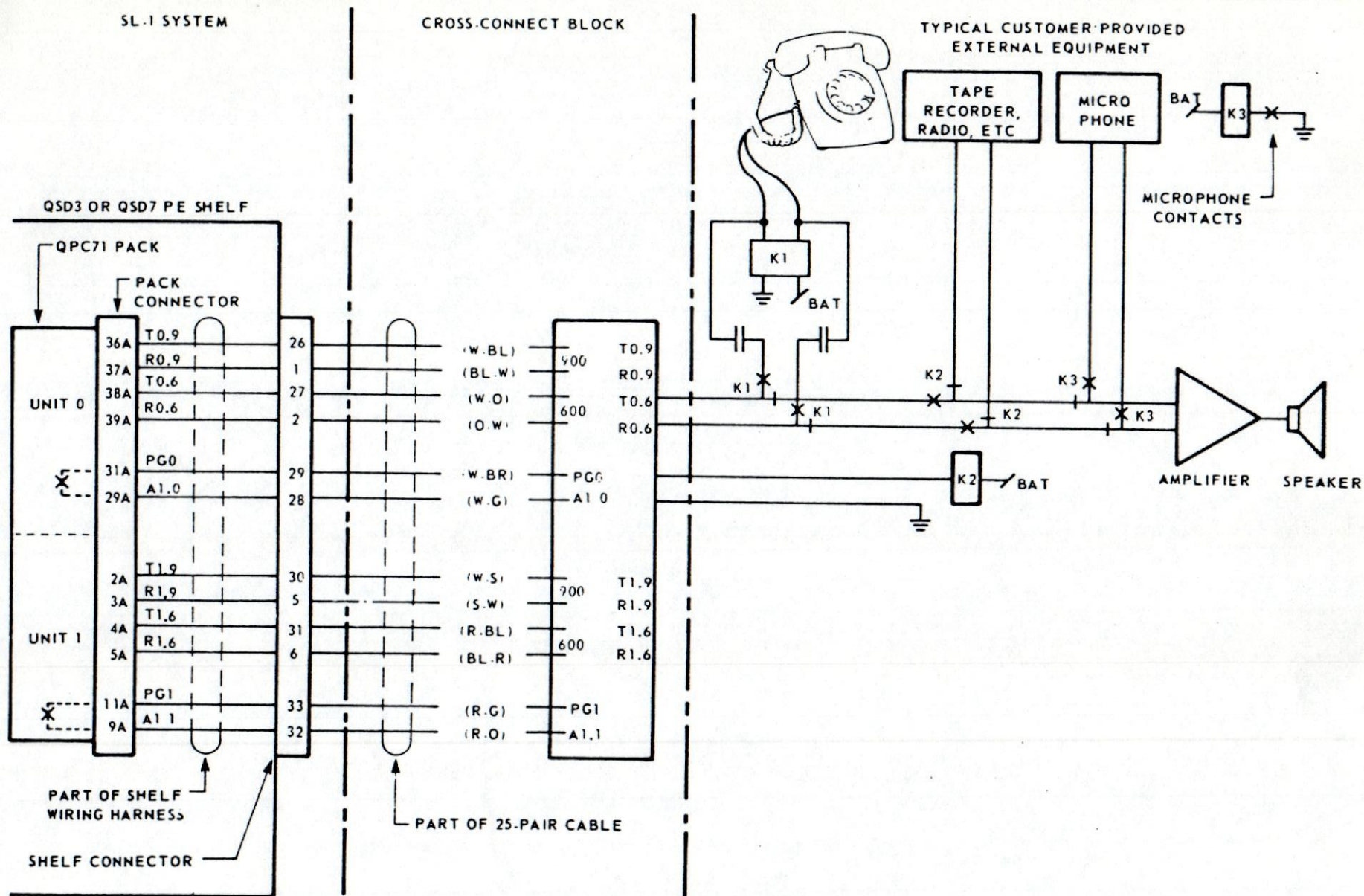
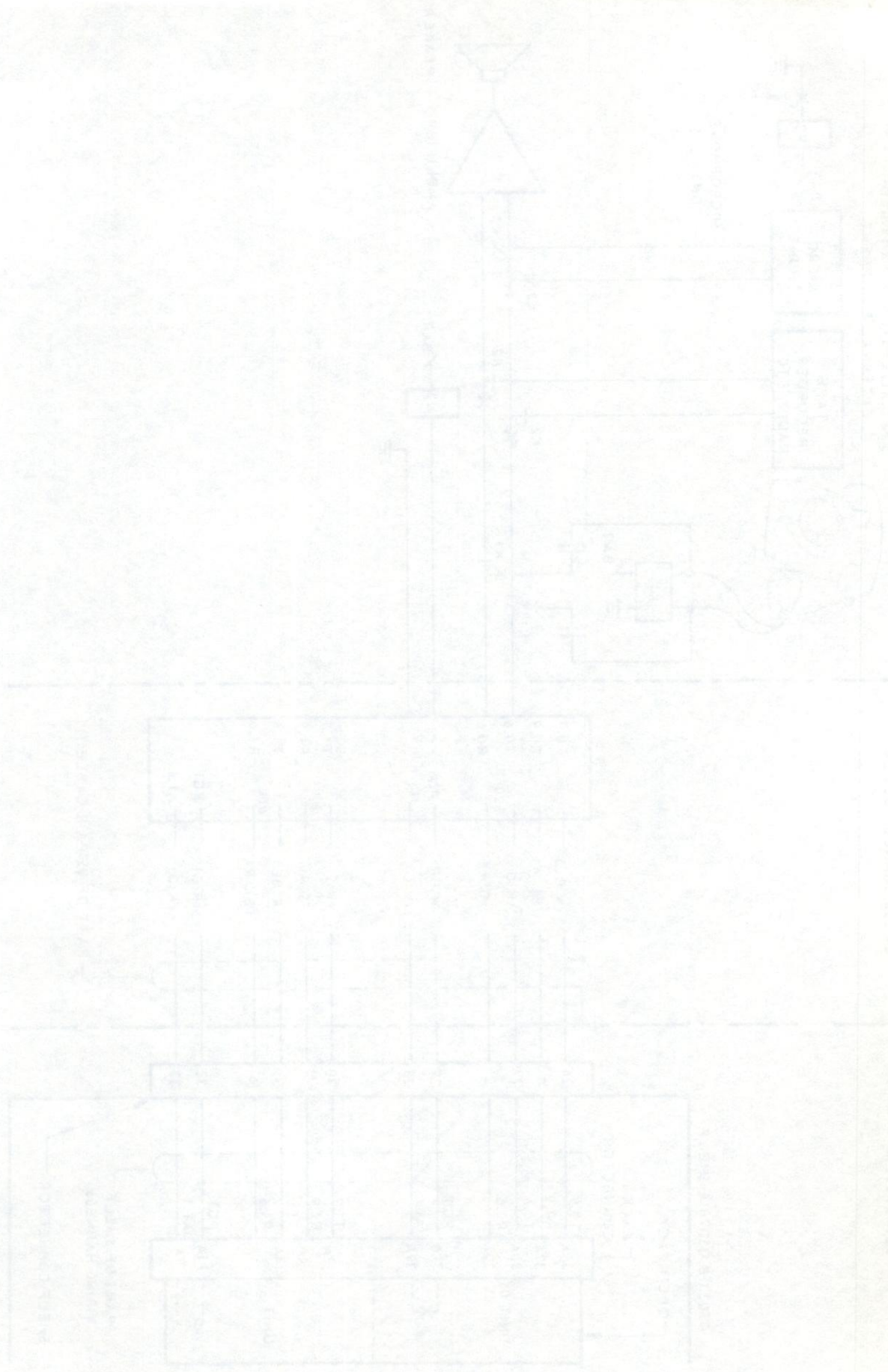


Fig. 5-5 — QPC71 Circuit Pack Interconnection With External Paging Equipment



Fig. 2 - Circuit diagram of the proposed system for the proposed system





✓ CREAR RUTA (LD16)

TKTP RCD

✓ CREAR TRK (LD14) SL-1 SYSTEM

RTMB n 1

✓ PROGRAMAR TELLA (LD11)

KEY XX EMR

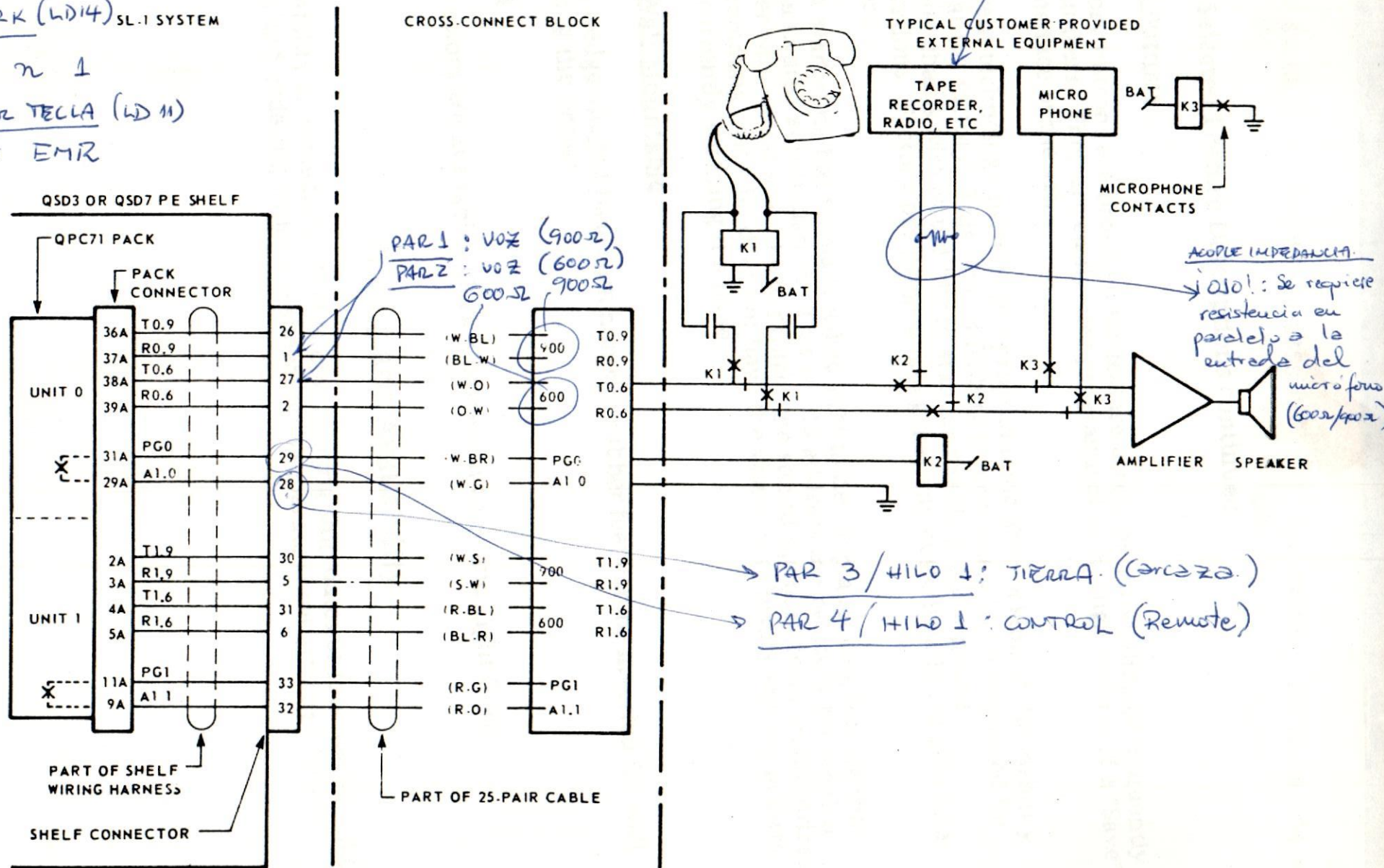


Fig. 5-5 — QPC71 Circuit Pack Interconnection With External Paging Equipment



## M8009 - Selected Feature Descriptions continued...

### Automatic Buttons

Six memory buttons are provided for feature access or auto-dialing of frequently dialed numbers. They are easily user programmable through the use of a "Save" key on the face of the set.

The current technology permits pre-programming and locking of the memory buttons at the factory. This type of feature is most likely to be requested by large hotel chains who would like to standardize their guest phone configurations. Factory pre-programming/key configuration is offered at extra cost.

NTCATA Marketing has formally asked PLM to develop a locking feature that can be activated at installation. This would address the needs of the smaller customer who would also like to protect the stored memory from unauthorized reprogramming, but who does not have the volume to justify factory presets. PLM is currently studying the issue.

### Desk/Wall Mountable

A new, wedge-shaped base with non-slip rubber feet can be inverted for wall mounting the phone.

### Colors

Three colors are available: Black, Charcoal Gray, and Light Gray.

### Pricing and Availability

Availability is immediate. A new quoting slip dated of four weeks A.R.O. Prices and ordering codes are shown on a separate sheet attached hereto.



## M8009 Basic Business Set

### Overview:

The M8009 Basic Business set is manufactured by Northern Telecom in our London, Ontario plant. It is the most basic model of a family of business sets that will be introduced throughout 1993. Its feature complement positions it as the replacement vehicle for Rapport, Rapport Plus, and the higher featured Unity sets.

### Feature Highlights:

- Tone Dialing
- Hold Key
- Link Key
- 6 Autodial Keys
- Line Powered
- Message Waiting Lamp
- H/S Volume Control
- Ringer Volume Control
- Desk or Wall Mount
- Redial Key
- Release Key
- C.O. or PBX model

## Selected Feature Descriptions

### Message Waiting Lamp

The Message Waiting lamp is bright and can be seen from a wide variety of angles. It also serves as a Hold Indicator and a Visual Ringing Indicator.

### Hand Set Volume Control

Volume through the hand set is controlled by a rocker bar on the face of the set. This is the same control that has become a standard on other Meridian set models.

### Ringer Volume Control

The ringing volume control is a thumb wheel located on the right hand edge of the set. It allows the user to select three levels of volume, or, to disable the ringer (off).

### C.O. or PBX Model

Two versions are available, depending on whether the set will be connected to a central office or to a PBX. Each version has slightly different side tone characteristics. In practice, it is difficult for most users under most circumstances to detect side tone variations. NTCALA Marketing has proposed to PLM that a universal version be developed with adjustable side tone settings. This option is currently being evaluated by PLM.



# M8009 Basic Business Set

## Overview:

The M8009 Basic Business set is manufactured by Northern Telecom in our London, Ontario plant. It is the most advanced member of a family of business sets that will be introduced throughout 1977. The M8009 set occupies a unique complement position as the replacement vehicle for Rapport, Rapport Plus, and the higher featured 1000 sets.

## Feature Highlights:

- Tone Dialing
- Hold Key
- Link Key
- 6 Autodial Keys
- Line Flashing
- Message Waiting Lamp
- Redial Key
- 102 Volume Control
- Release Key
- Ringtone Volume Control
- C.O. or PBX model
- Desk or Wall Mount

## Selected Feature Descriptions

### Message Waiting Lamp

The Message Waiting Lamp is bright red and can be seen from a wide variety of angles. It also serves as a Hold Indicator and a Visual Ringing Indicator.

### Hand Set Volume Control

Volume through the hand set is controlled by a slider bar on the side of the set. This is the same control that has been standard on other Northern set models.

### Ring Set Volume Control

The ringing volume control is a slider bar located on the right hand edge of the set. It allows the user to select three levels of volume, or to disable the ringer (off).

### C.O. or PBX Model

Two versions are available, depending on whether the set will be connected to a central office or to a PBX. Each version has slightly different side tone characteristics. In practice, it is difficult for most users under most circumstances to detect side tone variations. NTCAL Marketing has proposed to PLM that a universal version be developed with adjustable side tone settings. This is option is currently being evaluated by PLM.



# M8009

## BUSINESS SET



The M8009 gives you six programmable memory buttons to store frequently used numbers – customers, suppliers, the courier, and others. Or, you can store the code for features like Call Forwarding or Call Return. Customize your set by programming the best combination of features and numbers to suit your needs. Either way, you reach the service or person you need in a single keystroke.

Worried about accidentally disconnecting an important customer when transferring a call or activating a special feature? Just use the M8009's LINK key and you won't make a costly mistake. And, if you're tired of repeatedly trying to reach a busy number, the Redial key will make your life easier by automatically storing the last five numbers you dialed, enabling you to quickly review and return calls. Voice mail services from your telephone company are also easier to use with the M8009. An indicator light comes on to alert you to messages waiting. That same indicator signals your phone ringing or calls on hold – valuable aids in a hectic, noisy business office.

You can save time, save money, and improve service to customers and clients with the M8009. A convenient Hold button means you won't have to ask customers to call back when you need to check stock, find out a price, or retrieve a file. And, when you put the caller on hold and hang up the receiver, you can pick up the call at any extension phone.

You'll appreciate the attractive, compact, and functional design of the M8009, but you'll value how it helps you handle business more smoothly. Like all other business sets in the M8000 series, the M8009 can be used in either standalone or multi-set applications. Whether you're part of a professional firm, a small business, or operating an office at home, the affordable M8009 has all the features and flexibility to keep you competitive.

### M8009 FEATURE HIGHLIGHTS

- Six programmable memory keys for feature access or autodialing frequently called numbers
- LINK key for hookswitch flash
- Line Release key
- Redial key
- Hold key
- Message waiting/visual ringing indicator
- Desk/Wall mountable
- Parallel line jack for extension, fax or modem
- Available in Black, Grey, or Ash

### TECHNICAL SPECIFICATIONS

**Dial:** Tone

**FOC Number:** Complies with Part 15 and Part 68

**Power:** Line powered

*Note: Functionality of CLASS features assumes availability and customer subscription to those services.*

**nt** northern  
telecom

Northern Telecom  
4001 E. Chapel Hill-Nelson Hwy.  
Research Triangle Park, NC 27709  
1-800-NORTHEAN

Information subject to change since Northern Telecom reserves the right, without notice, to make changes in equipment design or components as progress in engineering or manufacturing methods may warrant.

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Printed in USA December 1992

Meridian is a trademark of Northern Telecom.



The M8009 gives you six programming memory buttons to store frequently used numbers - customers, suppliers, friends and others. Or you can store the code for a call to a specific number. Customers you call by programming the best combination of letters and numbers to suit your needs. Either way, you need this service or person you need to call.

Worried about accidentally disconnecting an important customer when you need a call or activating a code to which you use the M8009's Link Key? No more. A costly mistake. And if you're really interested in trying to reach someone, the Radial Key will make your call. It will automatically store the last number you dialed, enabling you to dial it again and return calls. You can also store your telephone company's name and address with the M8009. The M8009 is a compact, on-line, easy-to-use, and a great talking or dialing device. A great talking or dialing device.

The M8009 gives you six programming memory buttons to store frequently used numbers - customers, suppliers, friends and others. Or you can store the code for a call to a specific number. Customers you call by programming the best combination of letters and numbers to suit your needs. Either way, you need this service or person you need to call.

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**FEATURE HIGHLIGHTS**

- Six programming memory buttons to store frequently used numbers - customers, suppliers, friends and others. Or you can store the code for a call to a specific number.
- Customers you call by programming the best combination of letters and numbers to suit your needs. Either way, you need this service or person you need to call.
- Worried about accidentally disconnecting an important customer when you need a call or activating a code to which you use the M8009's Link Key? No more. A costly mistake. And if you're really interested in trying to reach someone, the Radial Key will make your call. It will automatically store the last number you dialed, enabling you to dial it again and return calls. You can also store your telephone company's name and address with the M8009. The M8009 is a compact, on-line, easy-to-use, and a great talking or dialing device. A great talking or dialing device.

**TECHNICAL SPECIFICATIONS**

- FCC Number Complies with Part 15 and 18 of the FCC Rules.
- Dimensions: 1.5" x 1.5" x 1.5"
- Weight: 1.5 oz.
- Power: 1.5W
- Frequency: 1.5 MHz
- Modulation: 1.5 kHz
- Bandwidth: 1.5 MHz
- Sensitivity: 1.5 dBm
- Output Power: 1.5 W
- Efficiency: 1.5%
- Reliability: 1.5 years
- Warranty: 1.5 years
- Price: 1.5 dollars
- Availability: 1.5 units
- Lead Time: 1.5 weeks
- Shipping Weight: 1.5 lbs
- Shipping Dimensions: 1.5" x 1.5" x 1.5"
- Country of Origin: 1.5
- Manufacturer: 1.5
- Distributor: 1.5
- Retailer: 1.5
- Customer Service: 1.5
- Technical Support: 1.5
- Training: 1.5
- Documentation: 1.5
- Accessories: 1.5
- Spare Parts: 1.5
- Repairs: 1.5
- Upgrades: 1.5
- Customization: 1.5
- Integration: 1.5
- Interoperability: 1.5
- Compatibility: 1.5
- Scalability: 1.5
- Flexibility: 1.5
- Portability: 1.5
- Reliability: 1.5
- Durability: 1.5
- Maintainability: 1.5
- Testability: 1.5
- Diagnosability: 1.5
- Recoverability: 1.5
- Security: 1.5
- Privacy: 1.5
- Confidentiality: 1.5
- Integrity: 1.5
- Availability: 1.5
- Accountability: 1.5
- Transparency: 1.5
- Openness: 1.5
- Honesty: 1.5
- Integrity: 1.5
- Trustworthiness: 1.5
- Reliability: 1.5
- Durability: 1.5
- Maintainability: 1.5
- Testability: 1.5
- Diagnosability: 1.5
- Recoverability: 1.5
- Security: 1.5
- Privacy: 1.5
- Confidentiality: 1.5
- Integrity: 1.5
- Availability: 1.5
- Accountability: 1.5
- Transparency: 1.5
- Openness: 1.5
- Honesty: 1.5
- Integrity: 1.5
- Trustworthiness: 1.5

**Int**  
telecom

1-800-NORTHTECH  
4000 E. Chandler Blvd., Suite 100  
Phoenix, AZ 85008-1000

Int Telecom is a leading provider of telecommunications services and solutions. We offer a wide range of services, including voice, data, and video. Our solutions are designed to meet the needs of businesses of all sizes. We are committed to providing excellent customer service and support. Contact us today to learn more about our services and solutions.

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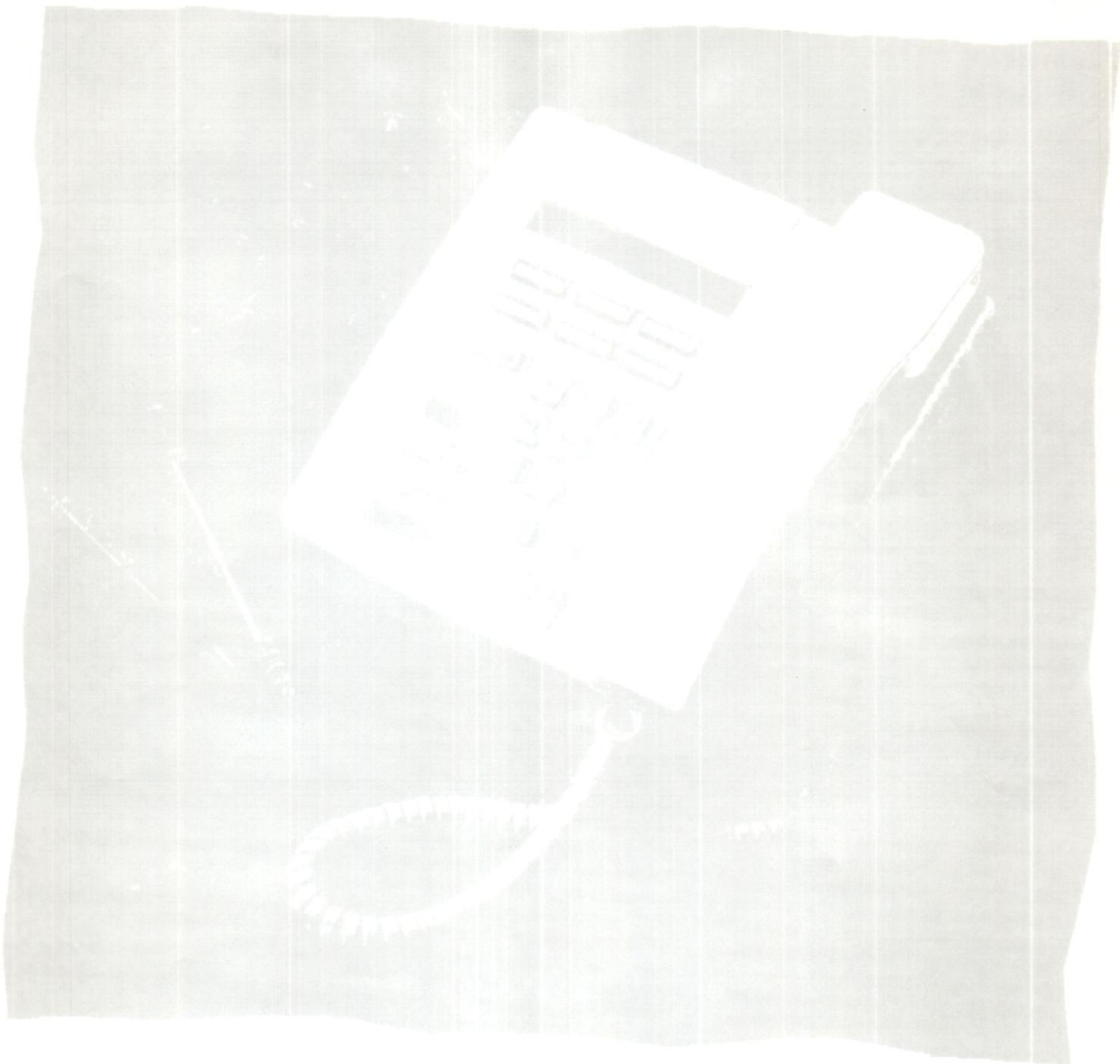


## M8009 BUSINESS SET

A phone that helps you work smarter, not harder, doesn't have to cost a small fortune. The M8009 is tangible proof. As part of a new family of easy-to-use business telephones, you'll find the M8009 saves you precious time every working hour with simple one-touch access to a variety of convenient communication features. Plus, it works equally well in both PBX and Centrex environments, or with standard telephone service in your office or home.

**nt** northern  
telecom





MT 2018 L.A. SALES ID:305-558-847 JUN 04'93 15:28 MT:004 F.03

A phone that helps you work smarter, not harder. You'll have to wait a while for that. The MT2018 is a long-term investment. As part of a new family of easy-to-use business telephones, you'll find the MT2018 offers you previous time-saving features with simply one touch access to a variety of convenient communication features. Plus, it works equally well in both FAX and Corded environments, or with standard telephone service in your office or home.

MT 2018 L.A. SALES ID:305-558-847 JUN 04'93 15:28 MT:004 F.03



# HARMONY: Single-line; Desk/Wall; 5 Colours

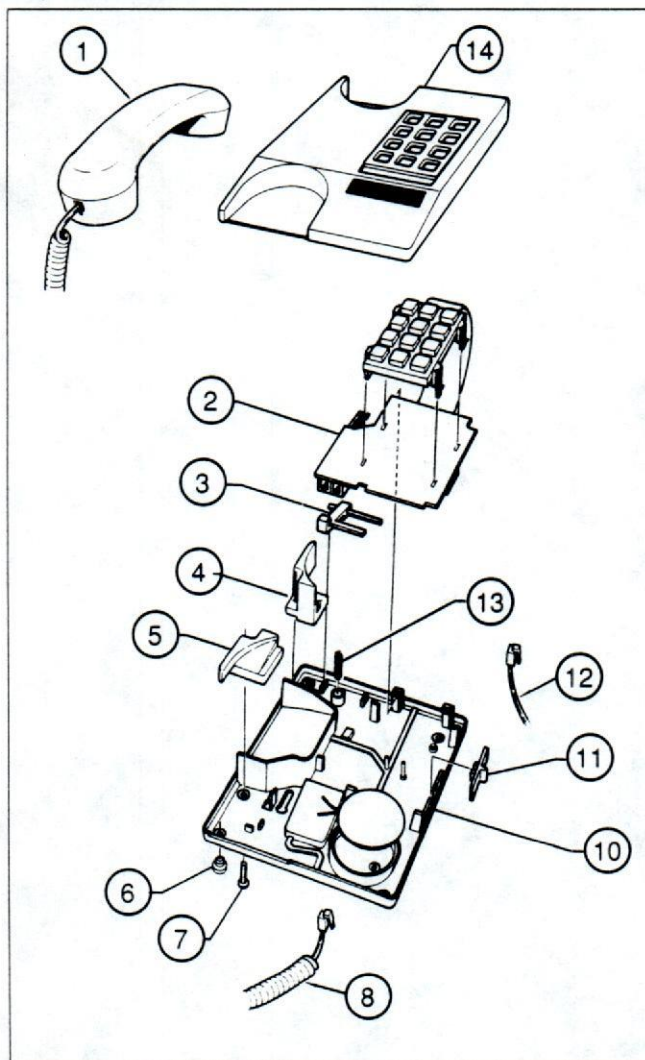
## Feature Highlights:

- Fully modular
- Elastomer dial pad providing DTMF signaling
- Scratch resistant matte finish
- Hearing aid compatible
- Equipped with 2.0m handset cord and 2.0m line cord
- Desk or wall mountable without special kits
- Hi / Lo tone alerter
- Handhold cavity for easy carrying
- Aesthetically pleasing, compact size
- Key pad buttons larger than standard
- Available with NTOC9AF Amplified Receive Handset

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0m H4DUQB-XX handset cord  
2.0m D2QB-87 line cord
- Alerter: Hi/Lo tone alerter
- Handset: NTOC09CA-XX, less cord, w/flux coil receiver, electret transmitter
- DOC No: 332 434, Ringer Load #10A
- NTP No: Northern Telecom Practice No: 503-2001-200
- Guide: P0636596 User Guide

## Exploded View:



## List of Parts:

|    |                              |          |
|----|------------------------------|----------|
| 1  | Handset                      | NTOC09AA |
| 2  | Network /Dial NTOC18AM       | A0326437 |
| 3  | Line Switch Plunger          | P0631552 |
| 4  | Weight (Top)                 | P0671792 |
| 5  | Weight (Bottom)              | P0671793 |
| 6  | Foot                         | P0633565 |
| 7  | Screw                        | P0601001 |
| 8  | Handset Cord (2.0M)          | H4DUQB-- |
| 10 | Base & Disc Alerter          | P0644352 |
| 11 | Alerter Switch Actuator      | P0631652 |
| 12 | Line Cord NT-D2QB-87 (2.0M)  | A0293344 |
| 13 | Compression Spring           | P0632861 |
| 14 | Housing                      | P06310-- |
| !  | Alerter Switch SPC36BC4L1    | P0647992 |
| !  | Line Switch                  | P0653058 |
| !  | Card Holder Parts Group      | P0633569 |
| !  | Wall Mount Kit NTOC1229      | A0326445 |
| !  | Jack Assembly - Handset      | P0632857 |
| !  | - Line Cord                  | P0659305 |
| !  | Installation Guide           | P0636596 |
| !  | Plunger "Clip" for wallmount | P0661997 |
| !  | Button & Frame Assy.         | P0704318 |
| !  | Button Retainer              | P0704317 |
| !  | Cord Retainer Clip           | P0706374 |
|    | (for repair of bases)        |          |

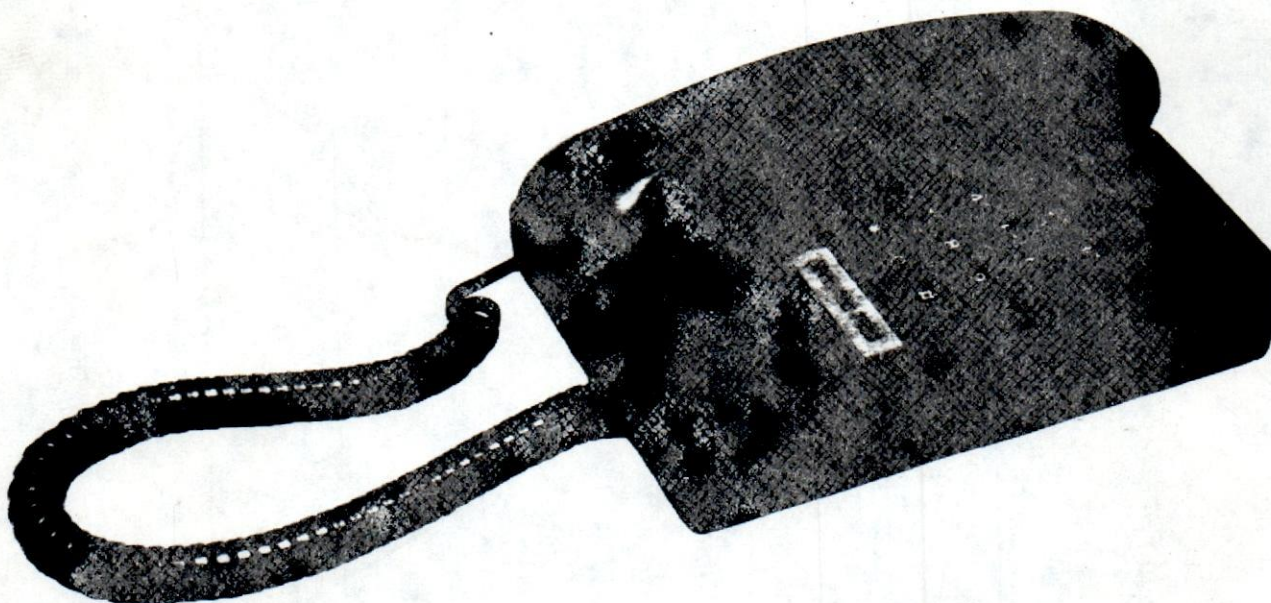
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-- Add the appropriate colour code





# HARMONY: Single-line; Desk/Wall; 5 Colours



## Ordering Information:

| ORDERING CODE | COLOUR                         | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|---------------|--------------------------------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| TOC12AE-23    | Bright Red                     | A0326828 | Stock                | 4                       | 1.25                    | 9 x 6 x 3                                  |
| NTOC12AE-58   | White                          | A0326829 |                      |                         |                         |                                            |
| NTOC12AE-67   | Almond                         | A0326435 |                      |                         |                         |                                            |
| NTOC12AE-93   | Light Grey                     | A0326816 |                      |                         |                         |                                            |
| NTOC12AE-94   | Dark Blue                      | A0326817 |                      |                         |                         |                                            |
| NTOC12AH-67   | Almond<br>*E/WNTOC09AF HANDSET | A0347758 |                      |                         | 0.6<br>(KILOGRAMS)      | 23 x 15 x 8<br>(CENTIMETERS)               |

## Description:

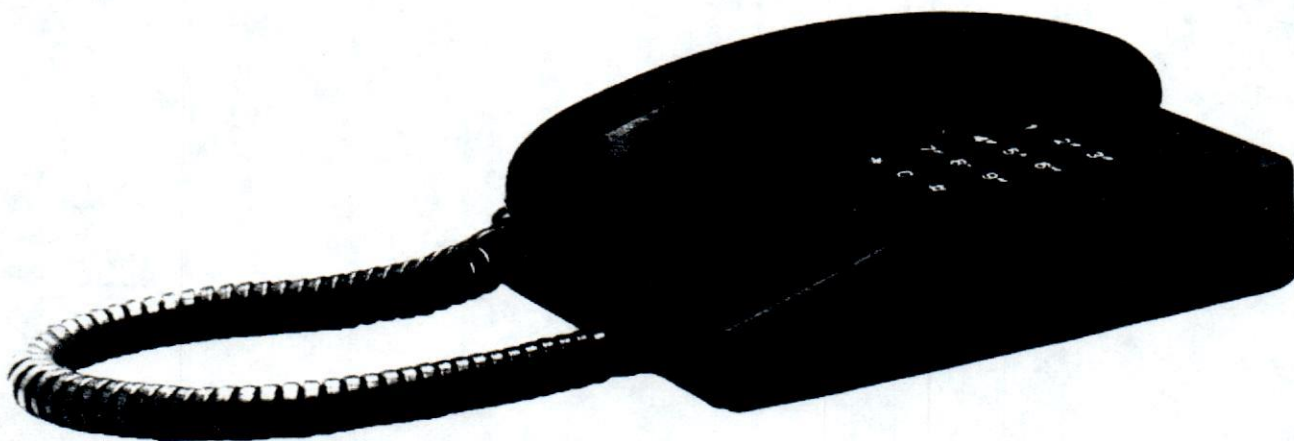
Harmony®, from Northern Telecom, the basic residential telephone that is built to meet today's market conditions. It is designed to ensure consumer satisfaction while meeting the stringent standards of telephone companies; plus, it is priced for broad market appeal. As the name implies, Harmony telephones go perfectly in virtually any room in the house. Five decorator colours and a scratch resistant matte finish let them "Harmonize" with any room decor. Harmony's trim, compact design looks great on any desk or countertop . . . or mounted on any wall in the house. Harmony is also one of the world's most popular telephones, with over 5 million sold!







# HARMONY with LINK: Single-line; Desk/Wall



## Ordering Information:

| ORDERING CODE | COLOUR     | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES INDIVIDUAL) |
|---------------|------------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| TOC12AJ-23    | Bright Red | A0350498 | Stock                | 4                       | 1.25                    | 9 x 6 x 3                                  |
| NTOC12AJ-58   | White      | A0350500 |                      |                         |                         |                                            |
| NTOC12AJ-67   | Almond     | A0350501 |                      |                         |                         |                                            |
| NTOC12AJ-93   | Light Grey | A0350502 |                      |                         |                         |                                            |
| NTOC12AJ-94   | Dark Blue  | A0350503 |                      |                         |                         |                                            |
|               |            |          |                      |                         | 0.6 (KILOGRAMS)         | 23 x 15 x 8 (CENTIMETERS)                  |

## Description:

Harmony with Link®, from Northern Telecom, is a new basic residential telephone that is built to meet today's market conditions. It is designed to ensure consumer satisfaction while meeting the stringent standards of telephone companies; plus, it is priced for broad market appeal. As the name implies, Harmony with Link telephones go perfectly in virtually any room in the house. Link, the feature that allows access to Call Waiting and 3-way calling without fear of losing a call. Five decorator colours and a scratch resistant matte finish let them "Harmonize" with any room decor. Harmony with Link's trim, compact design looks great on any desk or countertop . . . or mounted on any wall in the house. Harmony with Link is also one of the world's most popular telephones.





# HARMONY with LINK: Single-line; Desk/Wall

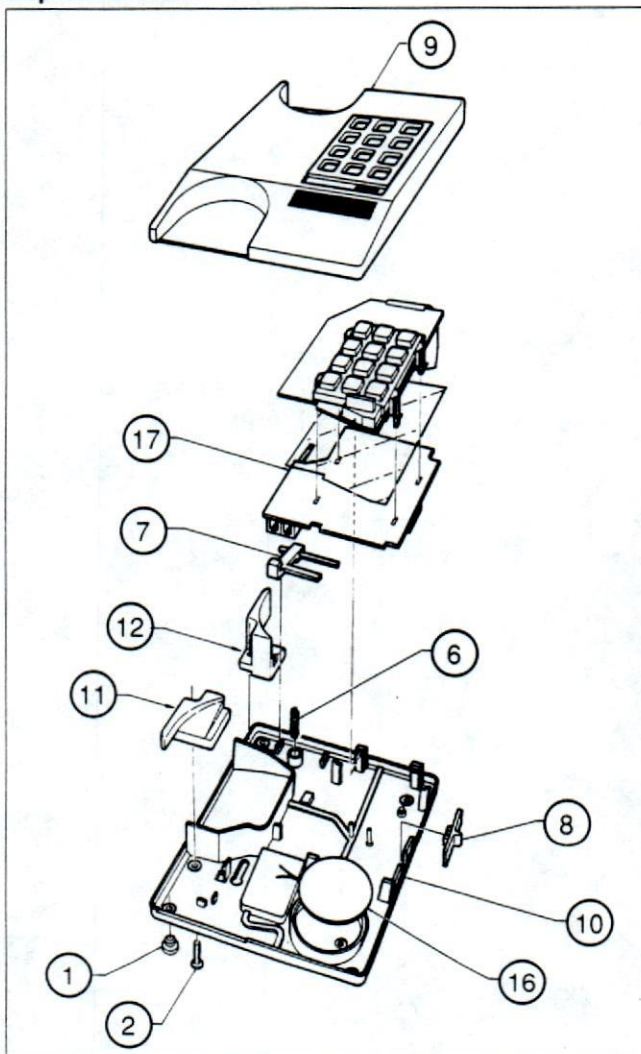
## Feature Highlights:

- Fully modular
- Link button, for hookswitch flash
- Elastomer dial pad providing DTMF signaling
- Scratch resistant matte finish
- Hearing aid compatible
- Equipped with 2.5m handset cord and 2.0m line cord
- Desk or wall mountable without special kits
- Hi / Lo tone alerter
- Handhold cavity for easy carrying
- Aesthetically pleasing, compact size
- Key pad buttons larger than standard

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.5m H4DUQB-XX handset cord  
2.0m D2QB-87 line cord
- Alerter: Hi/Lo tone alerter
- Timing: Link; 400 - 700ms.
- Handset: NT0C09CA-XX, less cord, w/flux coil receiver, electret transmitter
- DOC NO: 332 434 Ringer Load # 10A
- Guide: P0703799 Users Guide

## Exploded View:



## List of Parts:

|    |                                |            |
|----|--------------------------------|------------|
| 1  | Foot                           | P0633565   |
| 2  | Screw                          | P0601001   |
| 6  | Compression Spring             | P0632861   |
| 7  | Line Switch Plunger            | P0631552   |
| 8  | Alerter Switch Actuator        | P0631652   |
| 9  | Housing                        | P06310--   |
| 10 | Base & Disc Alerter            | P0644352   |
| 11 | Weight (Bottom)                | P0671793   |
| 12 | Weight (Top)                   | P0671792   |
| 17 | Printed Circuit Board NTOC14EK | A0350505   |
| !  | Line Switch                    | P0653058   |
| !  | Alerter Switch SPC36BC4L1      | P0647992   |
| !  | Line Cord NT-D2QB-87 (2.0m)    | A0293344   |
| !  | Card Holder Parts Group        | P0702260   |
| !  | Wall Mount Kit NTOC1229        | A0326445   |
| !  | Jack Assembly - Handset        | P0632857   |
|    | - Line Cord                    | P0659305   |
| !  | Insulator                      | P0704031   |
| !  | Handset                        | NTOC09AA-- |
| !  | Plunger "Clip" for wallmount   | P0661997   |
| !  | Installation Guide             | P0703799   |
| !  | Cord retainer clip             | P0706374   |
|    | (for repair of bases)          |            |

! Not Shown (For Information Only)

-- Add the appropriate colour code





# SIGNATURE: Single-line; Desk/Wall; FM; DTMF



## Ordering Information:

| ORDERING CODE | COLOUR     | CPC No   | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|---------------|------------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| TOC21AC-03    | Black      | A0326818 | Stock                | 4                       | 1.5                     | 11 x 10 x 4                                |
| NTOC21AC-58   | White      | A0357326 |                      |                         |                         |                                            |
| NTOC21AC-67   | Almond     | A0326423 |                      |                         |                         |                                            |
| NTOC21AC-93   | Light Grey | A0326819 |                      |                         |                         |                                            |
| NTOC21AC-94   | Dark Blue  | A0326820 |                      |                         |                         |                                            |
|               |            |          |                      |                         | 0.7 (KILOGRAMS)         | 28 x 25 x 10 (CENTIMETERS)                 |

## Description:

Signature® from Northern Telecom is a featured set aimed primarily at the residential market. Exhaustive research indicates consumers relate style, choice, intelligence and function with Signature. Eight feature buttons serve as a constant reinforcement of Signature's superiority. One button is designated for hookswitch flash, the LINK feature that allows access to Call Waiting and 3-way calling without fear of losing a call. Another key is dedicated to LNR. The other six are consumer programmable for one button access to other Custom Calling Features, or one button dialing of emergency or priority numbers. Signature meets stringent telephone company standards, with high durability, backed by high/low temperature and humidity cycling, extended life tests, impact, surge and static discharge tests.



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# SIGNATURE: Single-line; Desk/Wall; FM; DTMF

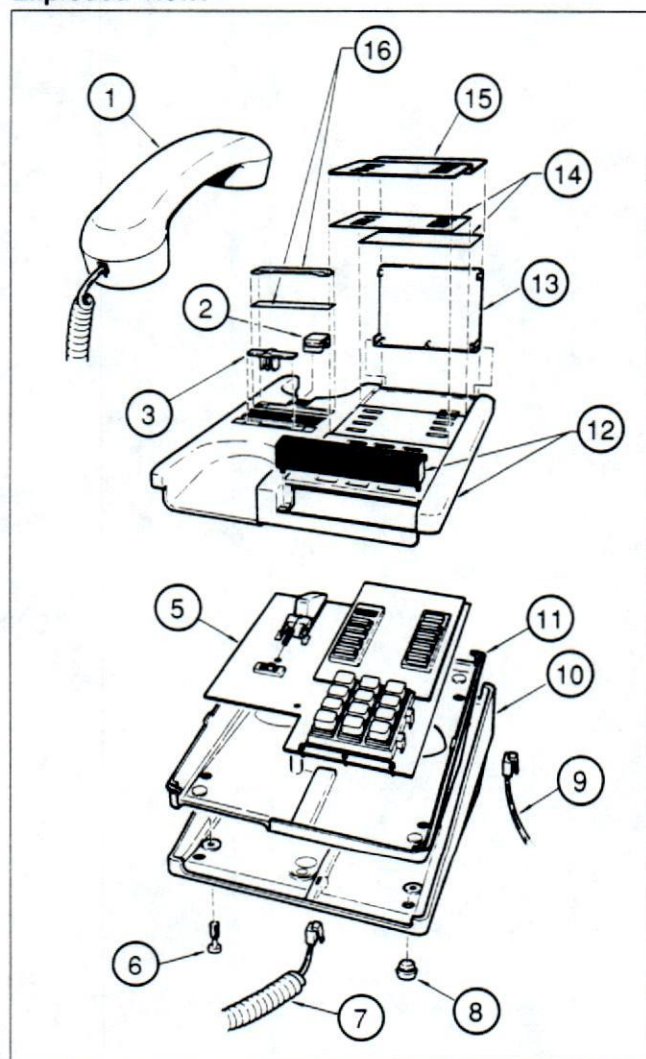
## Feature Highlights:

- Fully modular
- LINK key
- Last number redial
- Six (6) repertory dialing keys, up to 24 digits each
- Visual ringing indicator
- Feature-in-use visual indicator
- Scratch resistant matte finish
- Adjustable ringer/alerter volume control, (Hi, Med, Lo, Off)
- Personal directory w/privacy lid
- Desk or wall mountable by reversing base
- Built-in carrying handle for easy movement
- Program button

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0m H4DUQB-XX handset cord  
2.0m D2QB-87 line cord
- Alarmer: Hi/Med/Lo/Off tone alarmer
- Handset: NTOC09CA-XX, less cord, w/flux coil receiver, electret transmitter
- Indicators: 5mm LED
- Timing: Link: 500 ms  $\pm$  100 ms
- DOC No: 332 1002A, Ringer Load #10A
- NTP No: Northern Telecom Practice No: 503-2001-211
- Guide: P0659325 User Guide

## Exploded View:



## List of Parts:

|    |                                  |          |
|----|----------------------------------|----------|
| 1  | Handset                          | NTOC09AA |
| 2  | Wall Mount Clip                  | P06592-- |
| 3  | Volume Control Button            | P0658152 |
| 4  | Screw                            | P0601016 |
| 5  | Network/Dial NTOC18AJ            | A0326425 |
| 6  | Screw                            | P0601001 |
| 7  | Handset Cord (2.0M)              | H4DUQB-- |
| 8  | Foot                             | P0633565 |
| 9  | Line Cord NT-D2QB-87 (2.0M)      | A0293344 |
| 10 | Wedge                            | P06567-- |
| 11 | Base (Bright Red)                | P0658223 |
| 12 | Housing Assembly                 | P06645-- |
| 13 | Lid                              | P06569-- |
| 14 | Mat Group                        | P0662602 |
| 15 | Face Plate                       | P0644187 |
| 16 | Card Holder Group                | P0633569 |
| !  | Installation & Programming Guide | P0659325 |
| !  | Programming Label                | P0704845 |
| !  | Directory Card                   | P0662602 |

! Not Shown (For Information Only)  
-- Add the appropriate colour code





# SOLO: Single-line; FM; Dial-in-handset

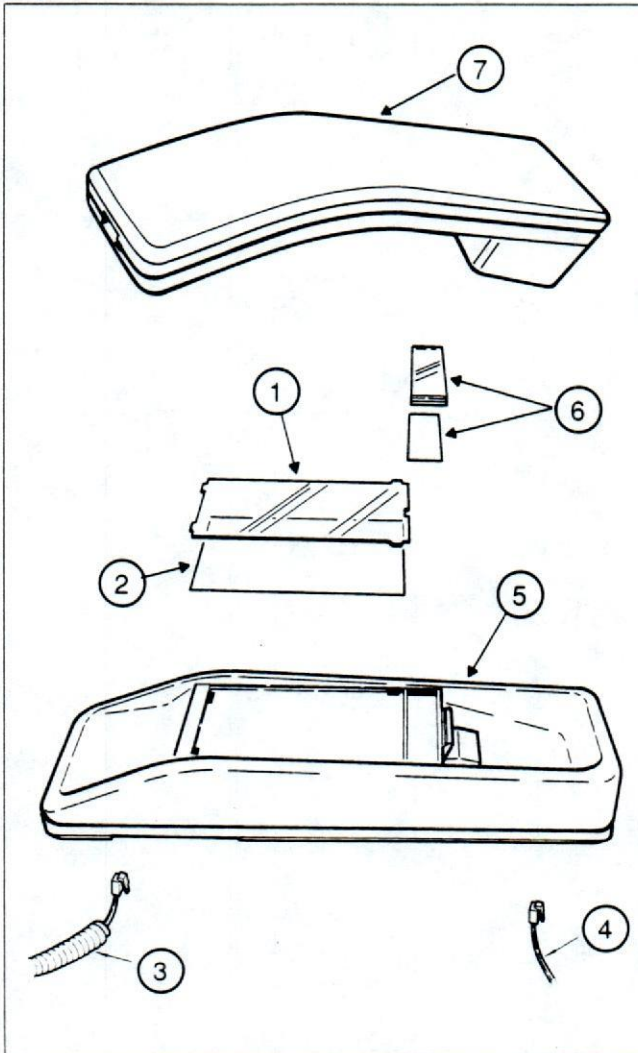
## Feature Highlights:

- Fully modular
- Ten (10) programmable memory keys
- Last number redial & special code-dial key
- Desk or wall mountable with optional wall kit
- Pleasant sounding, adjustable ringer with DND (do-not-disturb)
- Weighted, non-skid base with directory
- Personal directory
- LINK key for accessing custom calling services
- Three (3) colour coded keys for one-stroke access to important emergency numbers
- Handset release key
- Scratch resistant matte finish
- Suitable for second set in hotels/motels

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.5M H4DUQB-XX handset cord  
2.0MD2QB-87 line cord
- Alerter: Hi/Med/Lo/Off tone alerter
- Timing: Link: 500ms  $\pm$  100ms  
Release: approx. 2s
- Handset: NT0C024AA-XX, less cord, w/flux coil receiver, electret transmitter, dial pad, feature keys
- DOC No: 332 1725A, Ringer Load #10A
- NTP No: Northern Telecom Practice No: 503-2001-216
- Guide: PO662339 User Guide

## Exploded View:



## List of Parts:

|   |                                  |            |
|---|----------------------------------|------------|
| 1 | Face Plate                       | P0671756   |
| 2 | Directory Card                   | P0659336   |
| 3 | Handset Cord (2.0M)              | H4DUQB--   |
| 4 | Line Cord NT-D2QB-87 (2.0M)      | A0293344   |
| 5 | Base & Alerter Assy              | P0787852   |
| 6 | Card Holder Group                | P0633569   |
| 7 | Handset                          | NT0C24AA-- |
| ! | Kit Wall Mount NTOC2302          | A0328307   |
| ! | Installation & Programming Guide | P0662339   |
| ! | Directory Card                   | P0659336   |

### NOTE:

First time Retro-Fit (Metal-to-Plastic)  
Must Order - P0707733 Weight (Plunger End)  
- P0773732 Weight (Alerter End)  
- P0662647 Alerter Actuator  
- P0601014 Screw (P.C.B.)  
- P0601315 Screw (Weights)

! Not Shown (For Information Only)  
-- Add the appropriate colour code





# MAESTRO



## Ordering Information:

| ORDERING CODE | COLOUR     | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (Inches) INDIVIDUAL |
|---------------|------------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| JTOC80AA-58   | White      | A0347912 | Stock                | 4                       | 3.5                     | 10 x 7.5 x 4.5                             |
| NTOC80AA-67   | Almond     | A0347913 |                      |                         |                         |                                            |
| NTOC80AA-70   | Charcoal   | A0365646 |                      |                         |                         |                                            |
| NTOC80AA-75   | Sand       | A0365647 |                      |                         |                         |                                            |
| NTOC80AA-93   | Light Grey | A0347914 |                      |                         |                         |                                            |
|               |            |          |                      |                         | 2.0 (KILOGRAMS)         | 25 x 19 x 11 (CENTIMETERS)                 |

## Description:

Maestro®, a Telco exclusive product, is the first terminal to integrate into its design the capability and benefits of Call Management Service (CMS/Canada) or Custom Local Area Signalling Service (CLASS/U.S.A..)

Extensive market research matched the needs of the consumer with the features evolving in the Network, with the results being a terminal that provides the user with control of both incoming and outgoing call management. Maestro, in concert with the network "Call Display" feature allows the end-user to see the number of the calling party before answering the telephone, thus allowing them to make the decision on how, or whether, to answer the call. Up to 15 unanswered calls are retained in memory to be reviewed and called back at their convenience. When combined with the following features Maestro becomes a powerful terminal for both the residential and single line business markets:

- Callers button - allows the end user to scroll through the list of unanswered calls
- Link button - provides easy access to Network features such as Call Waiting and Three Way Calling
- Redial button - calls back last number call made from Maestro
- Recall button - calls back the last call that was answered on Maestro (must subscribe to Call Display)
- Dial button - allows the end-user to call any number on the display by pressing one button
- Save button - easily stores frequently called numbers into 10 memory locations
- Edit button - corrects numbers on display
- Contrast button - adjusts the Display for optimum readability in various lighting conditions
- Fully bilingual
- Plus many more exciting features.





# MAESTRO

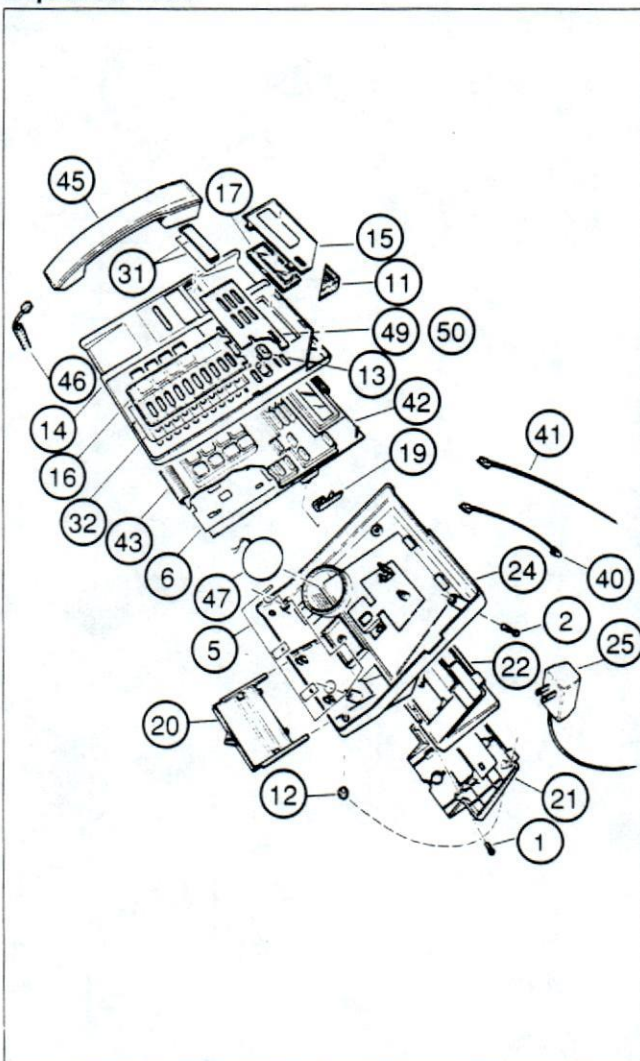
## Feature Highlights:

- Fully Modular
- Calling Line Identification Displays incoming calls\*
- Visual Ringing Light
- Display Contrast Button
- Line-in-Use Light/Privacy Indicator/Visual Ringing Lamp
- Desk/Wall Mountable
- Callers Button (Logging of up to 15 Unanswered Calls)\*
- Recall Button\*
- Link Button
- Dial Button
- Hold Button with remote release and visual flash
- 10 Memory keys
- Call forwarding Light
- Adjustable Receive Handset
- Adjustable Ringing (High/Med./Low/Off)
- Redial Button
- Clock (Date & Time)
- English/French Operation
- Quick Reference Booklet • Brandline Inserts available
- \*Must Subscribe to "Call Display" from your local Telephone Co.

## General Specifications:

- Materials High impact ABS plastic housing/cover/handset
- Cords 2.5 m H4DUQB-XX Handset Cord  
2.0 m D2QB-87 line cord
- Alerter Hi/Medium/Low/Off tone alerter; 16-50 Hz, 40-130 Vac.
- Handset NTOC81AA-XX, less cord, e/w flux coil receiver, electret transmitter
- DOC No: 332 3348A, Load Number: 16
- NTP No: Northern Telecom Practice No: 503-2011-200
- Guides P0706918 User Guide

## Exploded View:



## List of Parts:

|    |                                        |            |
|----|----------------------------------------|------------|
| 1  | Screw                                  | P0601044   |
| 2  | Screw                                  | P0601001   |
| 5  | E.S.D.Shield                           | P0707957   |
| 11 | Visual Ringing Lens                    | P0698796   |
| 12 | Foot                                   | P0633565   |
| 13 | Feature Lens                           | P0698797   |
| 14 | Cover                                  | P07701--   |
| 15 | Display Faceplate                      | P06988--   |
| 16 | Directory Faceplate                    | P0698798   |
| 17 | Display Lens                           | P0698799   |
| 19 | Volume Control Lever                   | P07794--   |
| 20 | Quick Reference Booklet Tray           | P07700--   |
| 21 | Wall Bracket                           | P07699--   |
| 22 | Desk Bracket                           | P07698--   |
| 24 | Base Assy                              | P07708--   |
| 25 | Transformer NPS50220-08L10             | A0367380   |
| 31 | Card Holder Group                      | P0633569   |
| 32 | Directory Card                         | P0698852   |
| 40 | Line Cord NT-D2QB-87 (0.2M)            | A0297188   |
| 41 | Line Cord NT-D2QB-87 (2.0M)            | A0314410   |
| 42 | Printed Circuit Board NTOC80ABA0347916 |            |
| 43 | Contact P.C.B. NTOC80AC                | A0363977   |
| 45 | Handset                                | NTOC81AA-- |
| 46 | Handset Cord (2.5M)                    | H4DUQB--   |
| 47 | Transducer (Alerter)NPS25192L1A0294172 |            |
| 49 | Printed Face Plate - English           | P07707--   |
| 50 | - French                               | P07706--   |
| !  | Owner's Guide - English                | P0706918   |
|    | - French                               | P0709039   |
| !  | Quick Reference Booklet-English        | P0698860   |
|    | -French                                | P0698861   |

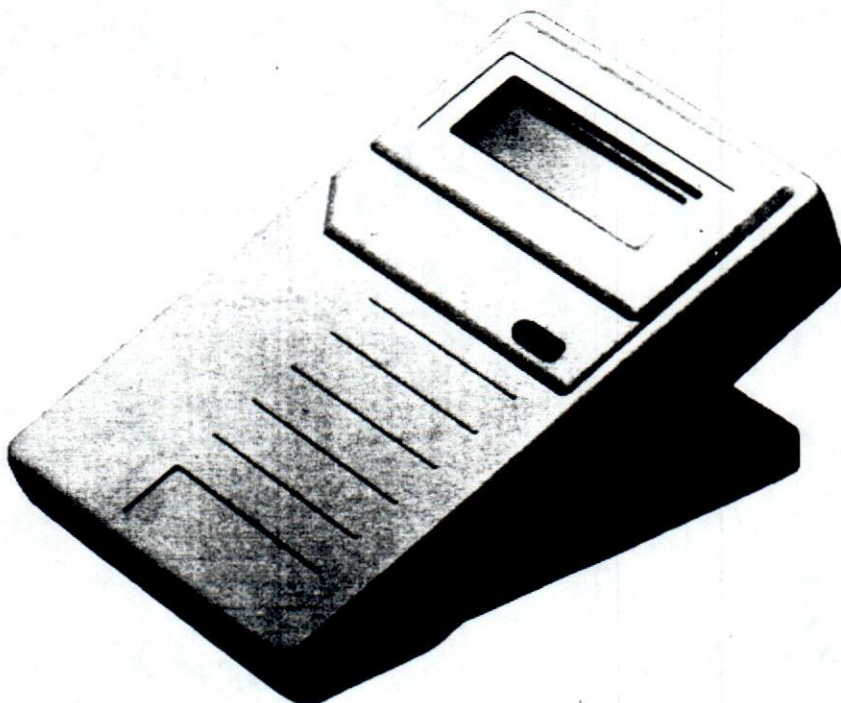
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-- Add the appropriate colour code





# ADJUNCT: PREVUE and INTERLUDE



## Ordering Information:

| ORDERING CODE                              | CAPACITY | CPC No   | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (Inches) INDIVIDUAL |
|--------------------------------------------|----------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| <b>PREVUE:</b> (Rental)<br>NTOC82AB1111    | 5-Memory | A0374532 | Stock                | 4                       | 1.0                     | 6.75 x 4.5 x 3.75                          |
| <b>INTERLUDE:</b> (Retail)<br>NTOC82AB1131 | 5-Memory | A0374531 | Stock                | 8                       | 0.5<br>(KILOGRAMS)      | 17 x 11 x 6.3<br>(CENTIMETERS)             |

## Description:

Adjunct units provide the end-user with a cost effective method of extending calling line identification throughout the home or office without the need to replace the existing telephone sets. The Adjuncts, which can either be co-located with a telephone or stand-alone, will display the name (where available) and number of the incoming call and retain it in memory for later retrieval. The Adjunct will be offered as both a Telco exclusive Rental (PREVUE®) product with five memories and as a Retail (INTERLUDE®) product with five memories. Prevue has a durable matte finish upper cover, while Interlude incorporates a more decorative laminate faceplate.

The features of PREVUE and INTERLUDE include: • storage and retrieval of either the last one or five incoming calls (depending upon model) • delivery of name (where available) and number • record of calls by name, number, date, time and number of calls from that number • language selectable English/French • low battery indicator • available in neutral almond.



1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in all financial dealings.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the sampling process and the statistical methods employed to interpret the results.

3. The third part of the document presents the findings of the study. It includes a series of tables and graphs that illustrate the trends and patterns observed in the data. The results are discussed in the context of the research objectives and the existing literature.

4. The fourth part of the document provides a conclusion and a summary of the key findings. It also includes a list of recommendations for future research and a discussion of the limitations of the study.

5. The final part of the document contains a list of references and a list of appendices. The references include a comprehensive list of the sources used in the study, and the appendices provide additional information and data that support the findings of the research.



# ADJUNCT: PREVUE and INTERLUDE

## Feature Highlights:

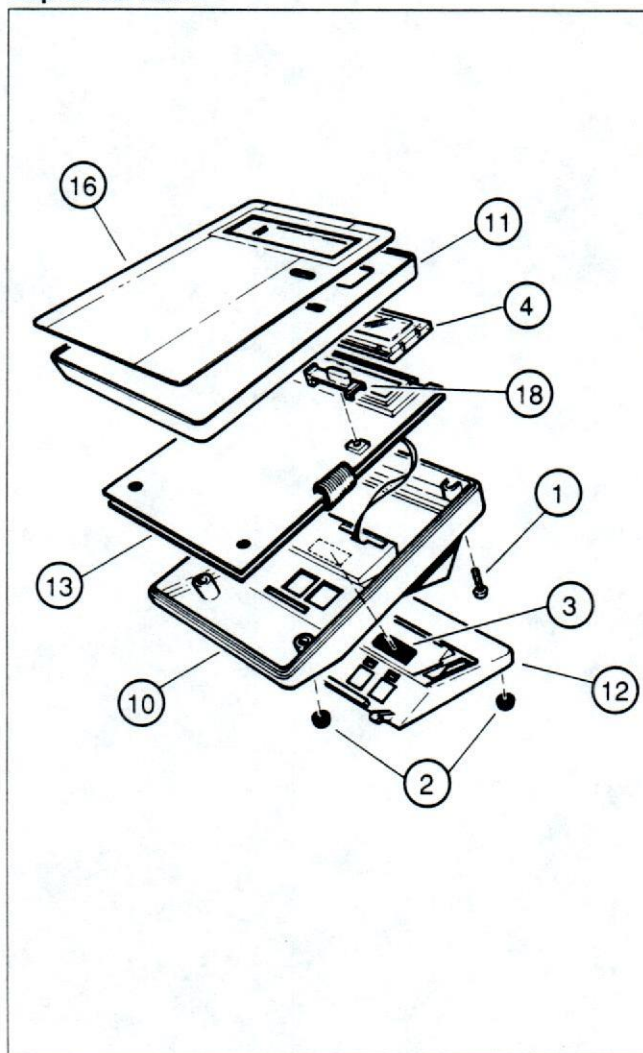
- Fully Modular
- Calling Line Identification Displays incoming calls\*
- Displays name, number, and date of call, and as well of repeat calls from same phone number
- Desk Mountable
- Brandline Inserts available for Prevue only
- English/French Operation
- Review Button
- Battery powered (9 Volt Battery not included)
- Low battery indicator

\* Must Subscribe to "Call Display" from your local Telephone Co.

## General Specifications:

- Materials High impact ABS plastic housing/cover
- Cords 1.0 m D2QB-87 line cord
- DOC No: 332 3722A, Load Number: 15A
- NTP No: Northern Telecom Practice No: 503-2011-200
- Guides P0714626 User Guide (NTOC82AB-Prevue-5m)  
P0714624 User Guide (NTOC82AB-Interlude-5m)

## Exploded View:



## List of Parts:

|    |                                 |          |
|----|---------------------------------|----------|
| 1  | Screw                           | P0601044 |
| 2  | Foot                            | P0618158 |
| 3  | Gasket                          | P0710529 |
| 4  | Lens                            | P0710527 |
| 10 | Base                            | P0785467 |
| 11 | Cover                           |          |
|    | - NTOC82AB1111                  | P0787467 |
|    | - NTOC82AB1131                  | P0786967 |
| 12 | Stand                           | P0785367 |
| 13 | P.C.B. NTOC83AD                 | A0374133 |
|    | (NTOC82AB1111) & (NTOC82AB1131) |          |
| 16 | Faceplate (NTOC82AB1131)        | P0714440 |
| 18 | Button                          |          |
|    | (NTOC82AB1111) & (NTOC82AB1131) | P0787095 |
| !  | OWNERS GUIDE                    |          |
|    | NTOC82AB1111                    | P0714626 |
|    | NTOC82AB1131                    | P0714624 |
| !  | Line Cord NT-D2QB-87 (1.0 m)    | A0373112 |
| !  | Regulatory Approval Label       |          |
|    | All Codes                       | P0714628 |

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-- Add the appropriate colour code





## JAZZ: Single Line; Tone/Pulse; Hold; Redial



### Ordering Information:

| ORDERING CODE | COLOUR | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) (IND.) | MEASUREMENTS L x W x H (Inches) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|--------------------------------|--------------------------------------------|
| NTD9883-03    | Black  | A0371995 | Stock                | 8                       | 2.0                            | 8.75 x 4.75 x 3.75                         |
| NTD9883-67    | Almond | A0371997 |                      |                         | 0.9<br>(KILOGRAMS)             | 22.2 x 12 x 9.5<br>(CENTIMETERS)           |

### Description:

Jazz®, with its sleek simple design and easy to use features is very much in tune with today's telephone needs. Designed by the market research, it has a European accent which makes it easy to match any decor, even in the home office. It's available in black, or almond. Jazz has a tone/pulse switchable dial which works on either tone or pulse service. Jazz comes equipped with a built-in hold button which enables you to place a call on hold, while its indicator light will remind you, and it releases automatically when you pick up the handset again or any extension in the home. Jazz will save you time with the convenience of last number redial. Jazz, the sleek, new single-line telephone set, manufactured with the traditional quality and reliability you have come to expect from Northern Telecom.





# JAZZ: Single Line; Tone/Pulse; Hold; Redial

## Feature Highlights:

- Fully modular
- Tone / Pulse switchable
- Hold button with indicator light
- Last number redial LNR
- Wall mountable without special kit
- Hi/Lo/Off ringer volume control
- Soft, non-mar rubber feet
- Sleek, sophisticated styling available in 2 contemporary colours

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Dial: Tone / Pulse dial pad
- Alerter: Hi/Lo/Off tone alerter; 16-68 Hz, 40-130 Vac
- CSA No: LR83174-9, Ringer Load #10A
- Guide P0713991, User, warranty guide

## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>       |
|---------------|--------------------------|
| P0714381      | Carton                   |
| P0714397      | Box Label - Black        |
| P0714396      | - Almond                 |
| P0714015      | Safety Instruction Sheet |
| P0713991      | Owners Guide - Eng.      |
| P0713992      | - Fr.                    |
| P0714107      | DOC Label                |
| P0714390      | Handset - Black          |
| P0714391      | - Almond                 |
| P0706546      | Hand Set Cord - Black    |
| P0706547      | - Almond                 |
| P0714385      | Function Strip - Black   |
| P0714386      | - Almond                 |
| P0698149      | Line Cord - Short        |
| P0714374      | Number Card              |
| P0714376      | Number Card Faceplate    |
| P0714379      | Wallmount Bracket        |
| P0714377      | Accent Strip             |





# PRIORITY: Single-line; Tone / Pulse; Illuminated Dial; Visual Ring



## Ordering Information:

| ORDERING CODE                                                                                                                                         | COLOUR | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS)(IND.) | MEASUREMENTS L x W x H (inches) INDIVIDUAL |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|----------------------|-------------------------|-------------------------------|--------------------------------------------|
| TOC60AA1111                                                                                                                                           | Black  | A0333839 | Stock                | 4                       | 2.0                           | 3.5 x 8.5 x 7.5                            |
| NTOC60AA5311                                                                                                                                          | White  | A0333842 |                      |                         | 0.9                           | 8.9 x 21.6 x 17.8                          |
| NTOC60AA4411                                                                                                                                          | Almond | A0333843 |                      |                         | (KILOGRAMS)                   | (CENTIMETERS)                              |
| <b>COLOR CODES:</b><br>1111 = Black base w/burgandy faceplate<br>5311 = White base w/light gray faceplate<br>4411 = Almond base w/dark gray faceplate |        |          |                      |                         |                               |                                            |

## Description:

With Priority®, from Northern Telecom, you get convenient and sophisticated features that make this fun phone one serious machine. And there are a variety of exciting and vibrant color designs - - perfect for literally any room in your home. The home office, the kitchen, kids' playroom, anywhere! Priority offers a LINK key for immediate access to all custom calling features such as call waiting and 3-way calling. A redial button lets you instantly redial the last number called with the push of a single button. Hotline button allows the speed and convenience of one-button dialing for your most important number, which can be easily changed. The push-button illuminated dial lets you see the entire dial face in a darkened room when the handset is lifted. No battery is required.





# **PRIORITY:** Single-line; Tone / Pulse; Illuminated Dial; Visual Ring

## **Feature Highlights:**

- Fully modular
- Tone / Pulse switchable
- Illuminated dial (line powered)
- Last number redial (LNR)
- Visual ring indication
- HOTLINE: single number direct access memory (16 digits)
- Three (3) position alerter
- Sophisticated styling
- LINK, feature access key
- Redial button
- Store button
- Memory retention for a full five minutes when set is unplugged
- Available in 3 decorator color combinations

## **General Specifications:**

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQB-XX handset cord  
2.0M D2QB-87 line cord
- Dial: Tone / Pulse dial pad
- Alerter: Hi/Lo/Off tone alerter; 16-68 Hz, 40-130 Vac
- DOC No: 332 2189A, Ringer Load #10A
- Guide: P0688748 User, warranty guide

## **FIELD REPLACEABLE PARTS:**

| <u>CPC.NO</u> | <u>DESCRIPTION</u>           |
|---------------|------------------------------|
| R0113447      | Carton                       |
| A0315049      | Line Cord                    |
| P0687020      | Face Plate - Burgundy        |
| P0687022      | - Light Grey                 |
| P0687021      | - Oxford Grey                |
| A0327129      | Handset Cord -Black          |
| A0333835      | - White                      |
| A0326844      | - Almond                     |
| A0320638      | Handset - Black              |
| A0326841      | - White                      |
| A0297169      | - Almond                     |
| P0633569      | Directory Card Group         |
| P0688748      | Owners Guide                 |
| P0688754      | Box I.D.Label-Black/Burgundy |
| P0688751      | -White/light Grey            |
| P0688752      | -Almond /Oxford Grey         |

# REPORT ON THE PROGRESS OF THE WORK DURING THE YEAR 1900

The work of the Department during the year 1900 has been characterized by a steady and continuous progress in all the various branches of the service. The most important results have been the completion of the Census of the Marine Mammals, the publication of the Census of the Fishes, and the completion of the Census of the Birds. The work of the Department has also been characterized by a steady and continuous progress in all the various branches of the service. The most important results have been the completion of the Census of the Marine Mammals, the publication of the Census of the Fishes, and the completion of the Census of the Birds.

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# PRIORITY LE: Tone / Pulse; Illuminated Dial; 10# Memory



## Ordering Information:

| ORDERING CODE                                                                                                                                                                                      | COLOUR     | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS)(IND.) | MEASUREMENTS L x W x H (Inches) INDIVIDUAL |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|----------------------|-------------------------|-------------------------------|--------------------------------------------|
| OC60AE1111                                                                                                                                                                                         | Charcoal   | A0341340 | Stock                | 4                       | 2.0                           | 3.5 x 8.5 x 7.5                            |
| OC60AE2212                                                                                                                                                                                         | Champagne  | A0341337 |                      |                         |                               |                                            |
| NTOC60AE3313                                                                                                                                                                                       | Light Grey | A0341338 |                      |                         |                               |                                            |
| NTOC60AE4414                                                                                                                                                                                       | Blue       | A0341339 |                      |                         |                               |                                            |
|                                                                                                                                                                                                    |            |          |                      |                         | 0.9 (KILOGRAMS)               | 8.9 x 21.6 x 17.8 (CENTIMETERS)            |
| <b>COLOR CODES:</b><br>1111 = Charcoal base w/black faceplate<br>2212 = Champagne base w/light brown faceplate<br>3313 = Blue base w/Navy faceplate<br>4414 = Lt. Gray base w/Dusty Rose faceplate |            |          |                      |                         |                               |                                            |

## Description:

The Priority LE®, from Northern Telecom, gives you a high quality telephone, with features generally costing much more! Priority LE has tone or pulse switchability, gives you three HOTLINE keys for emergency or other frequently called numbers, along with a ten number memory. Hold, LINK, redial and store keys, along with last number redial are just some of the built-in features Priority LE offers. The push-button illuminated dial lets you see the entire dial face in a darkened room when the handset is lifted. No battery is required. Priority LE is a sophisticated, single-line desk telephone set, with the traditional quality and reliability you have come to expect from Northern Telecom.



1. The first section of the report discusses the general findings of the study. It includes a summary of the objectives and the methods used to collect and analyze the data. The results are presented in a clear and concise manner, highlighting the key findings of the research.

2. The second section of the report provides a detailed analysis of the data. It includes a discussion of the statistical methods used to analyze the data and the results of the analysis. The findings are presented in a clear and concise manner, highlighting the key findings of the research.

3. The third section of the report discusses the implications of the findings. It includes a discussion of the limitations of the study and the potential for future research. The findings are presented in a clear and concise manner, highlighting the key findings of the research.

4. The fourth section of the report provides a conclusion and recommendations. It includes a summary of the findings and a discussion of the implications of the findings. The findings are presented in a clear and concise manner, highlighting the key findings of the research.



# PRIORITY LE: Tone / Pulse; Illuminated Dial; 10# Memory

## Feature Highlights:

- Fully modular
- Ten (10) number memory
- Visual Hold indicator
- Tone / Pulse switchable
- Illuminated dial (line powered)
- Last number redial (LNR)
- HOTLINE: three keys for direct access memory (16 digits)
- Three (3) position alerter
- LINK, feature access key
- Redial button
- Store button
- Memory retention for a full five minutes when set is unplugged

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQB-XX handset cord  
2.0M D2QB-87 line cord
- Dial: Tone / Pulse dial pad
- Alerter: Hi/Lo/Off tone alerter; 16-68 Hz, 40-130 Vac
- DOC No: 332 2189A, Ringer Load #10A
- Guide: P0695162 User, warranty guide

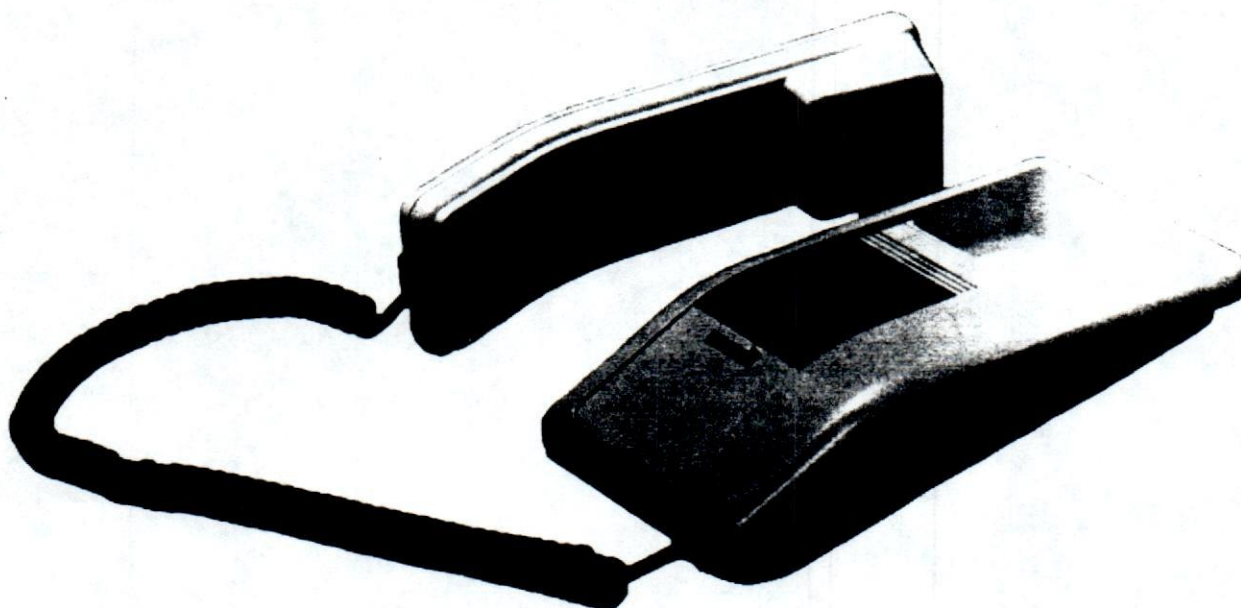
## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>              |
|---------------|---------------------------------|
| P0695163      | Carton                          |
| P0695123      | Face Plate - Black              |
| P0695124      | - Light Brown                   |
| P0695125      | - Dusty Rose                    |
| P0695125      | - Dark Blue                     |
| A0327128      | Handset Cords - Black           |
| A0341350      | - Champagne                     |
| A0302405      | - Grey                          |
| A0341351      | - Blue                          |
| A0341347      | Handset - Charcoal              |
| A0341348      | - Champagne                     |
| A0298054      | - Grey                          |
| A0341349      | - Blue                          |
| P0695155      | Box I.D.Labels - Charcoal/Black |
| P0695156      | - Champagne/Light Brown         |
| P0695157      | - Light Grey/Rose               |
| P0695158      | - Blue/Dark Blue                |
| P0689728      | Directory Card                  |
| P0689727      | Directory Face Plate            |
| P0695162      | Owners Guide                    |
| A0315049      | Line Cord                       |





# SYMPHONY 1000: Single-line; Tone / Pulse; Dial-in-handset



## Ordering Information:

| ORDERING CODE | COLOUR | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) (IND.) | MEASUREMENTS L x W x H (inches) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|--------------------------------|--------------------------------------------|
| 79518-58      | White  | A0337438 | Stock                | 12                      | 2.6                            | 10 x 7.5 x 3                               |
| J9518-67      | Almond | A0327111 |                      |                         |                                |                                            |
| NTD9518-93    | Grey   | A0327113 |                      |                         |                                |                                            |
|               |        |          |                      |                         | 1.2 (KILOGRAMS)                | 25.4 x 19.1 x 7.6 (CENTIMETERS)            |

## Description:

Symphony 1000® is a featured dial-in-handset telephone for residential use with a new standard of elegance. Symphony 1000 is a perfect composition of soft delicate styling and the latest technological advances. Symphony 1000 also makes an ideal second set for hotels and motels. The sleek, sophisticated styling adds glamour and contemporary elegance to any decor. Plus, the contoured handset with push button dial fits comfortably in your hand. Desk or wall mountable, Symphony 1000 can go in virtually any room in your home. Tone/pulse switchability means your phone is flexible, working on pulse as well as tone lines. Soft, attractive, decorator colors harmonize beautifully with the color scheme of virtually any room in your home. Symphony 1000 is in concert with what you need for today's personal communications.





# SYMPHONY 1000: Single-line; Tone / Pulse; Dial-in-handset

## Feature Highlights:

- Fully modular
- Tone / Pulse switchable
- Dial-in-handset
- Handset release key
- Last number redial LNR
- Wall mountable without special kit
- Hi/Low/Off ringer volume control
- Mute key for privacy from callers when desired
- Personal directory
- Soft, non-mar rubber feet
- Sleek, sophisticated styling

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQC-XX handset cord, P0683905  
2.0M D2QB-87 line cord  
2.0M D2QC-87 wall mount line cord
- Dial: Tone / Pulse dial pad
- Alerter: Hi/Low/Off tone alerter; 16-68 Hz, 40-130 Vac
- CSA No: LR83174-1, Ringer Load#10A
- Guide: P0678997, User, warranty guide

## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>         |
|---------------|----------------------------|
| P0678991      | Carton                     |
| P0678992      | Box Label - Almond         |
| P0678994      | - Light Grey               |
| P0702600      | - White                    |
| P0678995      | Index Card                 |
| P0687903      | Index Card Cover           |
| P0678997      | Owners Guide- (Eng. & Fr.) |
| X9950475      | DOC Label                  |
| P0702606      | Tone/Pulse Switch Overlay  |
| P0702621      | Battery Cover - Almond     |
| P0702624      | - Light Grey               |
| P0702625      | - White                    |
| P0683905      | Hand Set Cord - 2.0m       |
| P0683907      | - 4.0m                     |





# SYMPHONY 3000: Single-line; Tone / Pulse; Dial-in-handset



## Ordering Information:

| ORDERING CODE | COLOUR | CPC No   | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) (IND.) | MEASUREMENTS L x W x H (inches) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|--------------------------------|--------------------------------------------|
| 9519-58       | White  | A0337437 | Stock                | 12                      | 2.6                            | 10 x 7.5 x 3                               |
| NTD9519-67    | Almond | A0327114 |                      |                         | 1.2                            | 25.4 x 19.1 x 7.6                          |
| NTD9519-93    | Grey   | A0327115 |                      |                         | (KILOGRAMS)                    | (CENTIMETERS)                              |

## Description:

Symphony 3000®, is a feature rich dial-in-handset phone, for residential and hotel/motel applications. On a table or on the wall, Symphony 3000 marries a classically elegant shape and vibrant decorator colors with the high-tech convenience features people want most in a telephone. For security, for convenience, or for the sheer beauty it can add to a room, Symphony 3000 is the telephone you want. When urgent calls mean fast dialing is important, 3 color coded, programmable buttons make every second count. There's even a 10 number memory dialer for up to 24 digits each. Now you can see the numbers you're dialing, with the 10 digit, easy-to-read liquid crystal display. A directory card in the base gives immediate access to 10 code numbers plus color coding for the three emergency keys.



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# SYMPHONY 3000: Single-line; Tone / Pulse; Dial-in-handset

## Feature Highlights:

- Fully modular
- Tone / Pulse switchable
- LCD display
- 10 number memory key auto dialer for up to 24 digits each
- Ten digit liquid crystal display to show numbers dialed
- Three color-coded programmable keys for emergency numbers
- Low battery indicator
- Dial-in-handset
- Handset release key
- Last number redial LNR
- Wall mountable without special kit
- Hi/Lo/Off ringer volume control
- Personal directory
- Soft, non-mar rubber feet
- Sleek, sophisticated styling

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQB-XX handset cord, P0683905  
2.0M D2QB-87 line cord
- Dial: Tone / Pulse dial pad
- Alerter: Hi/Lo/Off tone alerter; 16-68 Hz, 40-130 Vac
- CSA No: LR83174-1, Ringer Load #10A
- Guide: P0683904, User, warranty guide

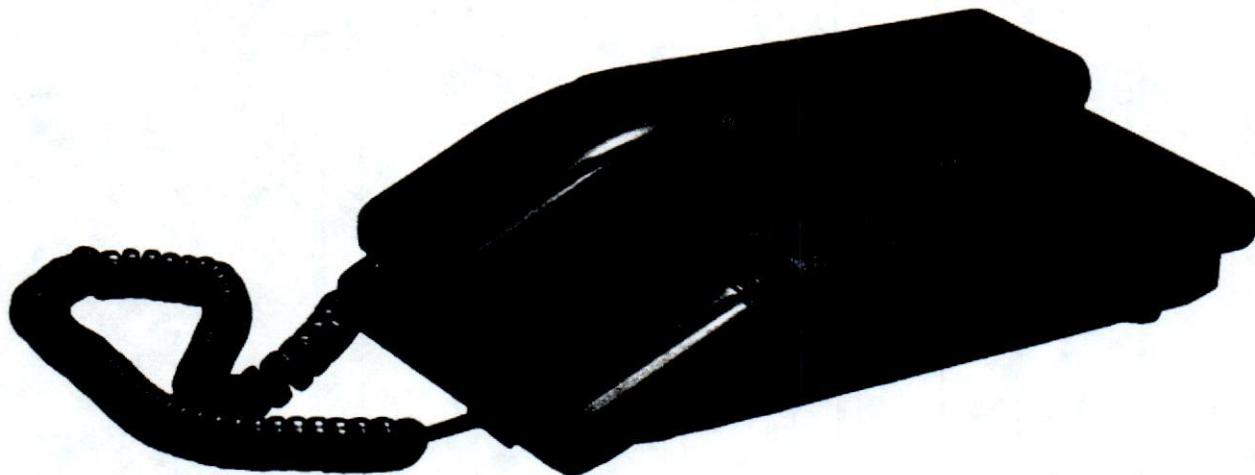
## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>          |
|---------------|-----------------------------|
| P0678998      | Carton                      |
| P0683900      | Box Label - Almond          |
| P0683901      | - Light Grey                |
| P0702601      | - White                     |
| P0678995      | Index Card                  |
| P0687903      | Index Card Cover            |
| P0683904      | Owners Guide - (Eng. & Fr.) |
| X9950475      | DOC Label                   |
| P0702606      | Tone/Pulse Switch Overlay   |
| P0702621      | Battery Cover - Almond      |
| P0702624      | - Light Grey                |
| P0702625      | - White                     |
| P0683905      | Hand Set Cord - 2.0m        |
| P0683907      | - 4.0m                      |





# **SYMPHONY 5000:** Two-line; Tone / Pulse; Dial-in-handset



## **Ordering Information:**

| ORDERING CODE | COLOUR | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) (IND.) | MEASUREMENTS L x W x H (inches) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|--------------------------------|--------------------------------------------|
| 79564-58      | White  | A0334799 | Stock                | 12                      | 2.6                            | 9.5 x 8 x 3                                |
| J9564-67      | Almond | A0332787 |                      |                         | 1.2<br>(KILOGRAMS)             | 24.1 x 21.6 x 7.6<br>(CENTIMETERS)         |

## **Description:**

Symphony 5000®, brings a new level of convenience to busy households. It is ideal for the in-home business, for the family with a personal computer that may tie up a single-line telephone, or for the family with a teenager who needs privacy for "that special call". Desk or wall mounted, Symphony 5000 offers you the best of the Symphony family, and a whole lot more! A conference button is provided for 3-way conversations, just touch the conference button to connect lines 1 and 2. An LED light indicates that this feature is in use. Symphony 5000 shows you with an LED line status indicator which line you have selected - just like the sophisticated business sets do. Symphony 5000 . . . 2-line convenience in an elegant design and vibrant colors.





# SYMPHONY 5000: Two-line; Tone / Pulse; Dial-in-handset

## Feature Highlights:

- Fully modular
- Tone / Pulse switchable
- 2 Listed directory lines, with line-in-use indicators
- Conference button for easy 3-way conversations
- Hold button
- LCD display
- 10 number memory key auto dialer for up to 24 digits each
- Ten digit liquid crystal display to show numbers dialed
- Three color-coded programmable keys for emergency numbers
- Dial-in-handset
- Handset release key
- Last number redial LNR
- Wall mountable without special kit
- Hi/Lo/Off ringer volume control
- Personal directory

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQB-XX handset cord, P0683905
- Dial: Tone / Pulse dial pad
- Alserter: Hi/Lo/Off tone alserter; 16-68 Hz, 40-130 Vac
- CSA No: LR83174-2, Ringer Load #10A
- Guide: P0698154, User, warranty guide

## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>        |
|---------------|---------------------------|
| P0698146      | Carton                    |
| P0698150      | Box Label - Almond        |
| P0698152      | - White                   |
| P0698147      | Index Card                |
| P0702604      | Index Card Cover          |
| P0698154      | Owners Guide (Eng. & Fr.) |
| X9950547      | DOC Label                 |
| P0702606      | Tone/Pulse Switch Overlay |
| P0702621      | Battery Cover - Almond    |
| P0702625      | - White                   |
| P0683905      | Hand Set Cord - 2.0m      |
| P0683907      | - 4.0m                    |
| P0698148      | Line Cord (Long)          |
| P0698149      | (Short)                   |





# SYMPHONY 6000: Digital Answering Machine



## Ordering Information:

| ORDERING CODE | COLOUR | CPC No   | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) (IND.) | MEASUREMENTS L x W x H (inches) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|--------------------------------|--------------------------------------------|
| 'TD9845-58    | White  | A0359376 | Stock                | 6                       | 3.5                            | 10 x 11 x 3.5                              |
| 'NTD9845-67   | Almond | A0359377 |                      |                         | 1.6<br>(KILOGRAMS)             | 25.4 x 27.9 x 8.9<br>(CENTIMETERS)         |

## Description:

Symphony 6000®, the sleek compact digital answering machine which has the great looks of a contemporary telephone, and operates just as easily, gives you two excellent products both a telephone and answering machine in one unit. Symphony 6000 available in white or almond can be either desk or wall mounted, offers you two-Answer Modes - Normal mode gives your greeting then records the caller's message (your choice of 1 or 3 minute formats) while Announce only gives your pre-recorded message then shuts itself off automatically. Call screening is available, if you wish by adjusting the volume, to hear the incoming calls, or simply turn the volume off if you don't want to be disturbed. The Symphony 6000 provides full beeperless remote feature capability which allows message retrieval from any touchtone telephone. The one-digit security code can access all of its features including the Toll Saver which lets you know if there are any messages waiting for you before it answers your call - a real money saver on long distance calls. Symphony 6000 can be used like an electronic mailbox with its Personal Memo feature that enables you to leave messages for the spouse or kids, and a LED indicator lets you know when a memo is waiting. When answering a call Symphony is voice activated for both starting up and shutting down. If answering a call from an extension Symphony 6000 will automatically shut down to avoid interfering with your call. Plus the many telephone features including ; dial-in handset, last number redial, mute, and disconnect buttons, tone/pulse switchable dial and 3-position volume dialer is truly a contemporary offering.

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# SYMPHONY 6000: Digital Answering Machine

## Feature Highlights:

- Fully modular
- Tone / Pulse switchable
- 2 Answer Modes - Normal and Answer only
- Beeperless remote along with Toll Saver
- Personal Mailbox
- Flashing LED message indicator
- Voice activated disconnect switch
- Dial-in-handset
- Handset release key
- Last number redial LNR
- Wall mountable without special kit
- Hi/Lo/Off ringer volume control
- Personal directory

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQB-XX handset cord, P0683905
- Dial: Tone / Pulse dial pad
- Alserter: Hi/Lo/Off tone alserter; 16-68 Hz, 40-130 Vac
- CSA No: LR83174-6, Ringer Load #10A
- Guide P0705759, User, warranty guide

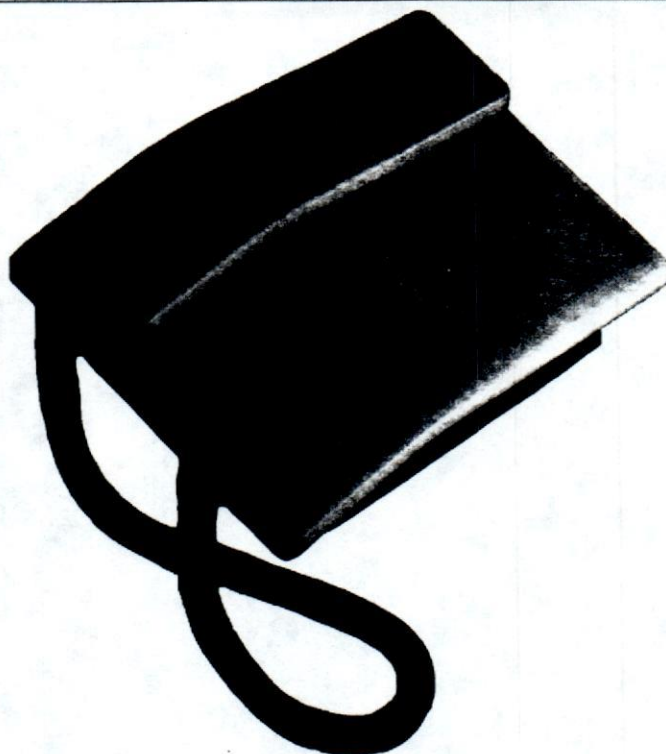
## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>       | <u>CPC.NO</u> | <u>DESCRIPTION</u> |
|---------------|--------------------------|---------------|--------------------|
| P0708612      | Carton                   | P0708619      | Wallet Card - Eng. |
| P0708613      | Box Label - Almond       | P0708620      | - Fr.              |
| P0708614      | - White                  | P0702604      | Index Card         |
| P0708607      | Index Card               |               |                    |
| P0708608      | Tape Micro-Cassette      |               |                    |
| P0705759      | Owners Guide -Eng.       |               |                    |
| P0706608      | - Fr.                    |               |                    |
| P0708609      | Battery Cover - Almond   |               |                    |
| P0708610      | - White                  |               |                    |
| P0708617      | Door - Almond            |               |                    |
| P0708618      | - White                  |               |                    |
| P0683905      | Hand Set Cord - 2.0m     |               |                    |
| P0683907      | - 4.0m                   |               |                    |
| P0698148      | Line Cord (Long)         |               |                    |
| P0698149      | (Short)                  |               |                    |
| P0708611      | AC Adapter               |               |                    |
| P0708615      | Instruction Label - Eng. |               |                    |
| P0708616      | - Fr.                    |               |                    |





# SYMPHONY 8000: Digital Answering Machine



## Ordering Information:

| ORDERING CODE | COLOUR | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) (IND.) | MEASUREMENTS L x W x H (inches) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|--------------------------------|--------------------------------------------|
| VTD9847-67    | Almond | A0359381 | Stock                | 6                       | 3.5                            | 10 x 11 x 3.75                             |
|               |        |          |                      |                         | 1.0<br>(KILOGRAMS)             | 25.4 x 27.9 x 8.9<br>(CENTIMETERS)         |

## Description:

Symphony 8000®, the sophisticated answering machine that is both a telephone and answering machine in one unit. Symphony 8000 is available in almond can be either desk or wall mounted, offers you 3-Answer Modes - Normal mode gives your greeting then records the caller's message (your choice of 1 or 3 minute formats), Announce only gives your pre-recorded message then shuts itself off automatically, and Caller I.D. which lets you know who is calling by a distinctive ringing pattern. Call screening is available, if you wish by adjusting the volume, to hear the incoming calls, or simply turn the volume off if you don't want to be disturbed. The Symphony 8000 provides full beeperless remote feature capability which allows message retrieval from any touchtone telephone. The two-digit security code can access all of its features including the Toll Saver which lets you know if there are messages waiting for you before it answers your call - a real money saver on long distance calls. Symphony 8000 can be used like an electronic mailbox with its Personal Memo feature enables you to leave messages for the spouse or kids, and a LED indicator lets you know when a memo is waiting. When answering a call, Symphony is voice activated for both starting up and shutting down. If answering a call from an extension, Symphony 8000 will automatically shut down to avoid interfering with your call. Along with other feature plus the many telephone features including ; dial-in handset, last number redial, mute, and disconnect buttons, tone/pulse switchable dial and 3-position volume alerter is truly a contemporary set.





# SYMPHONY 8000: Digital Answering Machine

## Feature Highlights:

- Fully modular
- Tone / Pulse switchable
- 3 Answer Modes - Normal , Answer only, Caller I.D.
- Beeperless remote along with Toll Saver
- Personal Mailbox
- LED digital message display
- Disconnect switch is voice activated
- Dial-in-handset
- Handset release key
- Last number redial LNR
- Wall mountable without special kit
- Hi/Lo/Off ringer volume control

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQB-XX handset cord, P0683905
- Dial: Tone / Pulse dial pad
- Alerter: Hi/Lo/Off tone alerter; 16-68 Hz, 40-130 Vac
- CSA No: LR83174-6, Ringer Load #10A
- Guide P0705760, User, warranty guide

## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>       | <u>CPC.NO</u> | <u>DESCRIPTION</u> |
|---------------|--------------------------|---------------|--------------------|
| P0708928      | Carton                   | P070864       | Wallet Card - Eng. |
|               |                          | P0708625      | - Fr.              |
| P0708622      | Box Label - Almond       |               |                    |
| P0708623      | - White                  | P0702604      | Index Cover        |
| P0708621      | Index Card               |               |                    |
| P0708608      | Tape Micro-Cassette      |               |                    |
| P0705760      | Owners Guide - Eng.      |               |                    |
| P0705758      | - Fr.                    |               |                    |
| P0708609      | Battery Cover - Almond   |               |                    |
| P0708610      | - White                  |               |                    |
| P0708617      | Door - Almond            |               |                    |
| P0708618      | - White                  |               |                    |
| P0683905      | Hand Set Cord - 2.0m     |               |                    |
| P0683907      | - 4.0m                   |               |                    |
| P0698148      | Line Cord (Long)         |               |                    |
| P0698149      | (Short)                  |               |                    |
| P0708611      | AC Adapter               |               |                    |
| P0708626      | Instruction Label - Eng. |               |                    |
| P0708627      | - Fr.                    |               |                    |





# SYMPHONY 9000: Digital Answering Machine



## Ordering Information:

| ORDERING CODE | COLOUR | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) (IND.) | MEASUREMENTS L x W x H (Inches) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|--------------------------------|--------------------------------------------|
| ITD9848-58    | White  | A0359382 | Stock                | 6                       | 3.5                            | 10 x 11 x 3.75                             |
| NTD9848-67    | Almond | A0359383 |                      |                         | 1.6<br>(KILOGRAMS)             | 25.4 x 27.9 x 8.9<br>(CENTIMETERS)         |

## Description:

Symphony 9000<sup>®</sup>, the sophisticated answering machine that is; both a telephone and answering machine -in one unit. Symphony 9000 available in white or almond can be either desk or wall mounted, offers you 3-Answer Modes - Normal mode gives your greeting then records the caller's message (your choice of 1 or 3 minute formats), Announce only gives your pre-recorded message then shuts itself off automatically, and Caller I.D. which lets you know who is calling by a distinctive ringing pattern. Call screening is available, if you wish by adjusting the volume, to hear the incoming calls, or simply turn the volume off if you don't want to be disturbed. The Symphony 9000 provides full beeperless remote feature capability which allows message retrieval from any touchtone telephone. The two-digit security code can access all of its features including the Toll Saver which lets you know if there are messages waiting for you before it answers your call - a real money saver on long distance calls Symphony 9000 can be used like an electronic mailbox with its Personal Memo feature enables you to leave messages for the spouse or kids, and a LED indicator lets you know when a memo is waiting. When answering a call Symphony is voice activated for both starting up and shutting down. If answering a call from an extension, Symphony 9000 will automatically shut down to avoid interfering with your call. Along with other feature plus the many telephone features including, dial-in handset, last number redial, disconnect buttons, 3 Emergency buttons, 10 memory code redial, dialed number display tone/pulse switchable dial and 3-position volume alerter is truly the ultimate set.





# SYMPHONY 9000: Digital Answering Machine

## Feature Highlights:

- Fully modular
- Tone / Pulse switchable
- 3 Answer Modes - Normal, Answer only, Caller I.D.
- Beeperless remote along with Toll Saver
- Personal Mailbox
- LED digital message display
- Disconnectis voice activated
- Dial-in-handset
- Handset release key
- Last number redial LNR
- 3 Emergency memory buttons
- 10 Memory code dial
- Dialed number display

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0M H4DUQB-XX handset cord, P0683905
- Dial: Tone / Pulse dial pad
- Alarmer: Hi/Low/Off tone alarmer; 16-68 Hz, 40-130 Vac
- CSA No: LR83174-6, Ringer Load #10A
- Guide P0702604, User, warranty guide

## FIELD REPLACEABLE PARTS:

| <u>CPC.NO</u> | <u>DESCRIPTION</u>       | <u>CPC.NO</u> | <u>DESCRIPTION</u> |
|---------------|--------------------------|---------------|--------------------|
| P0708928      | Carton                   | P0708626      | Wallet Card - Eng. |
|               |                          | P0708625      | - Fr.              |
| P0708622      | Box Label - Almond       | P0702604      | Index Cover        |
| P0708623      | - White                  |               |                    |
| P0708621      | Index Card               |               |                    |
| P0708608      | Tape Micro-Cassette      |               |                    |
| P0705760      | Owners Guide - Eng.      |               |                    |
| P0706758      | - Fr.                    |               |                    |
| P0708609      | Battery Cover - Almond   |               |                    |
| P0708610      | - White                  |               |                    |
| P0708617      | Door - Almond            |               |                    |
| P0708618      | - White                  |               |                    |
| P0683905      | Hand Set Cord - 2.0m     |               |                    |
| P0683907      | - 4.0m                   |               |                    |
| P0698148      | Line Cord (Long)         |               |                    |
| P0698149      | (Short)                  |               |                    |
| P0708611      | AC Adapter               |               |                    |
| P0708626      | Instruction Label - Eng. |               |                    |
| P0708627      | - Fr.                    |               |                    |

# SYNOPSIS OF THE PROCEEDINGS

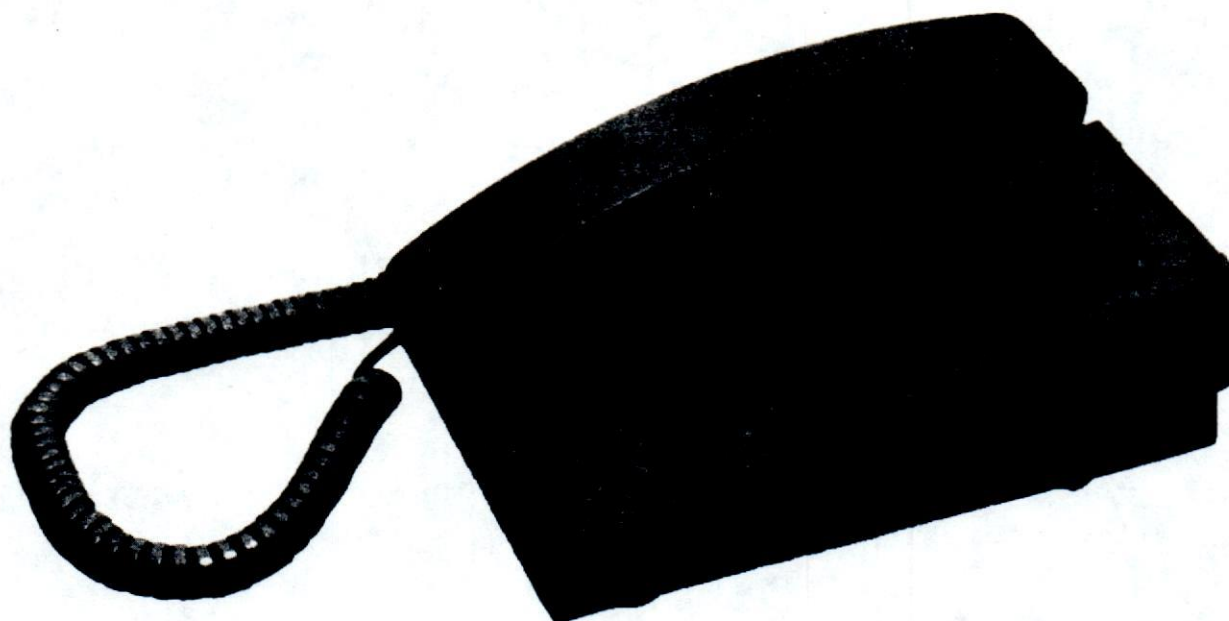
OF THE

COMMISSIONERS OF THE LAND OFFICE  
IN RESPONSE TO A RESOLUTION  
PASSED BY THE HOUSE OF COMMONS  
ON THE 14TH MARCH 1881

| NAME OF THE<br>LANDHOLDERS | AMOUNT OF<br>LAND | REMARKS |
|----------------------------|-------------------|---------|
| J. H. B. & Co.             | 1000              | 1000    |
| J. H. B. & Co.             | 1000              | 1000    |



# UNITY I : Single-line; Desk/Wall



## Ordering Information:

| ORDERING CODE              | COLOUR                                              | CPC No.                  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|----------------------------|-----------------------------------------------------|--------------------------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| ITOC22DA-03<br>NTOC22DA-35 | Black<br>Chamelon Grey<br><br>* E/W NORSTAR HANDSET | A0358712 *<br>A0358711 * | Stock                | 4                       | 1.0                     | 9 x 6 x 3.5                                |
|                            |                                                     |                          |                      |                         | 0.5<br>(KILOGRAMS)      | 23 x 15 x 9<br>(CENTIMETERS)               |

## Description:

Northern Telecom's Unity® family represents the ultimate expression of Terminal excellence in materials, quality, workmanship, engineering and manufacturing. Quality and reliability are uncompromised and features are planned to meet a multitude of applications, without product proliferation. UNITY I shares in this sophisticated excellence, as the basic member of the UNITY family, with a confidence that separates UNITY from all others. UNITY I offers state-of-the-art technology, with the traditional quality and reliability you have come to expect from the the Telecom Terminals Division of Northern Telecom.





# UNITY I : Single-line; Desk/Wall

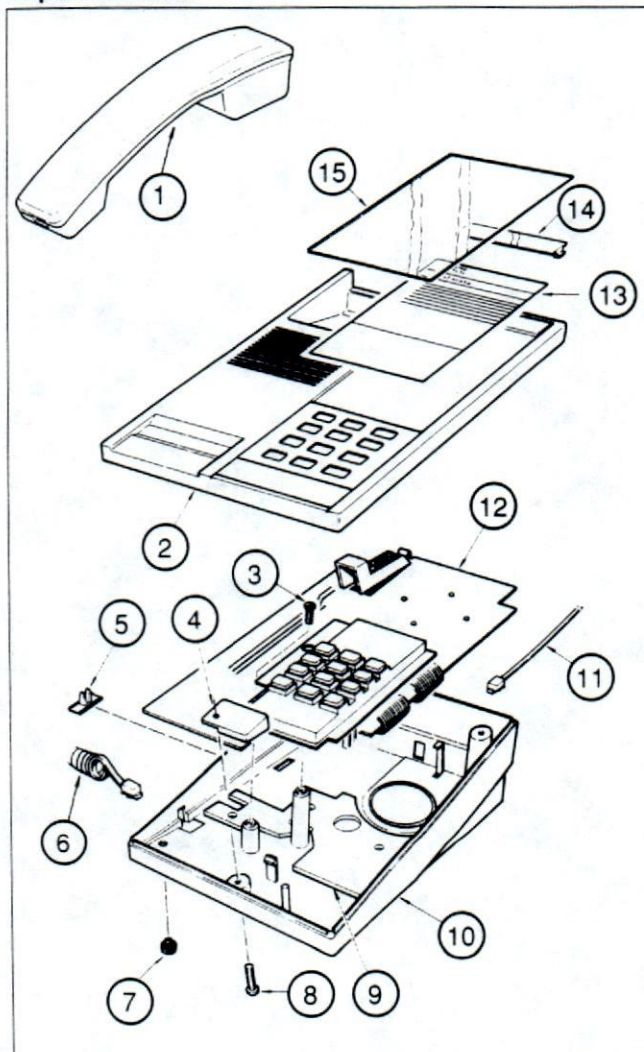
## Feature Highlights:

- Fully modular
- Changeable personal directory
- Compatible with PBX, CO & stand-alone Centrex
- Hearing aid compatible
- Equipped with 2.0m handset cord and 2.0m line cord
- Wall mountable with optional kit
- Hi/Lo/Off tone alerter adjustments
- Private brand label "logo" inserts available

## General Specifications:

- Materials: High impact ABS plastic housing/base/handset
- Cords: 2.0m NE-H4DUQB-Color, handset cord
- Alerter: Adjustable, electronic, tone alerter:
- Handset: NT0C09ED-XX, less cord, w/flux coil receiver electret transmitter
- DOC No: 332 849A, Ringer Load #10A
- NTP No: Northern Telecom Practice No: 503-2001-202
- Guide: P0647975, Installation, Programming Guide

## Exploded View:



## List of Parts:

|                                      |            |
|--------------------------------------|------------|
| 1 Handset - BTS                      | NTOCO9BA-- |
| - NORSTAR (shown)                    | NTOCO9ED-- |
| 2 Housing                            | P06461--   |
| 3 Screw                              | P0601316   |
| 4 Weight                             | P0697348   |
| 5 Volume Control Button              | P06482--   |
| 6 Handset Cord (2.0 M)               | H4DUQB--   |
| 7 Foot                               | P0633565   |
| 8 Screw                              | P060100    |
| 9 Weight                             | P0662347   |
| 10 Base                              | P06444--   |
| 11 Line Cord NT-D2QB-87 (2.0m)       | A0293344   |
| 12 Network/Dial NTOC18AK             | A0326431   |
| 13 Mat - English                     | P0644184   |
| - French                             | P0647998   |
| 14 NT Logo Insert (Brandline Window) | P06463--   |
| 15 Faceplate                         | P0644164   |
| ! Installation & Programming Guide   | P0647975   |
| ! Kit Wall Mount-Set Only            | NTOC2215-- |
| -E/W Acces.                          | NTOC3007-- |
| ! PBX Feature Access Card-Eng.       | P0659313   |
| -Fr.                                 | P0659314   |

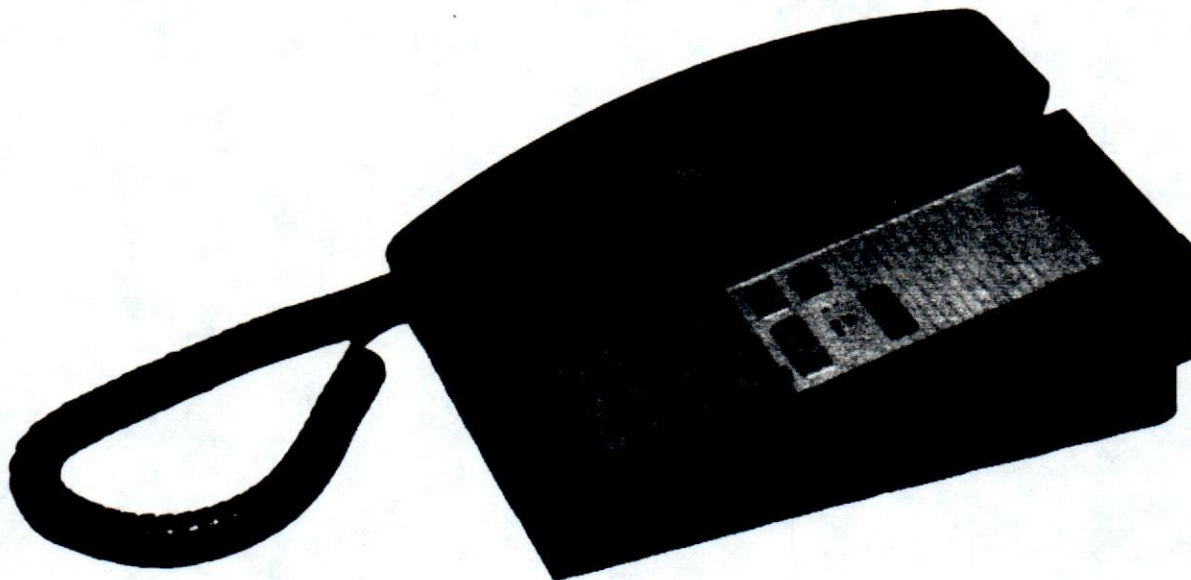
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# UNITY II : Feature Access; 1-Line; Desk/Wall



## Ordering Information:

| ORDERING CODE              | COLOUR                                           | CPC No.                | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|----------------------------|--------------------------------------------------|------------------------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| NTOC22DB-03<br>NTOC22DB-35 | Black<br>Chameleon Grey<br>* E/W NORSTAR HANDSET | A0358714*<br>A0358713* | Stock                | 4                       | 1.0                     | 9 x 6 x 3.5                                |
|                            |                                                  |                        |                      |                         | 0.5<br>(KILOGRAMS)      | 23 x 15 x 9<br>(CENTIMETERS)               |

## Description:

Unity II® is the enhanced basic member of the Unity family, designed to be flexible for virtually all organizational needs. This "New Enhanced Standard" features a pleasant sounding electronic tone alerter, scratch resistant matte finish and a personal directory. Added convenience is provided by a LINK button (hookswitch flash) for call transfers and other hookswitch activated features. A separate line release button eliminates the need to replace the handset for line disconnect. These time saving additions eliminate the threat of accidental cut-off during feature access, ideal for PBX, CO, and Centrex applications. You can turn off the tone ringer and be notified of incoming calls by the visual ringing indicator.





# UNITY II : Feature Access; 1-Line; Desk/Wall

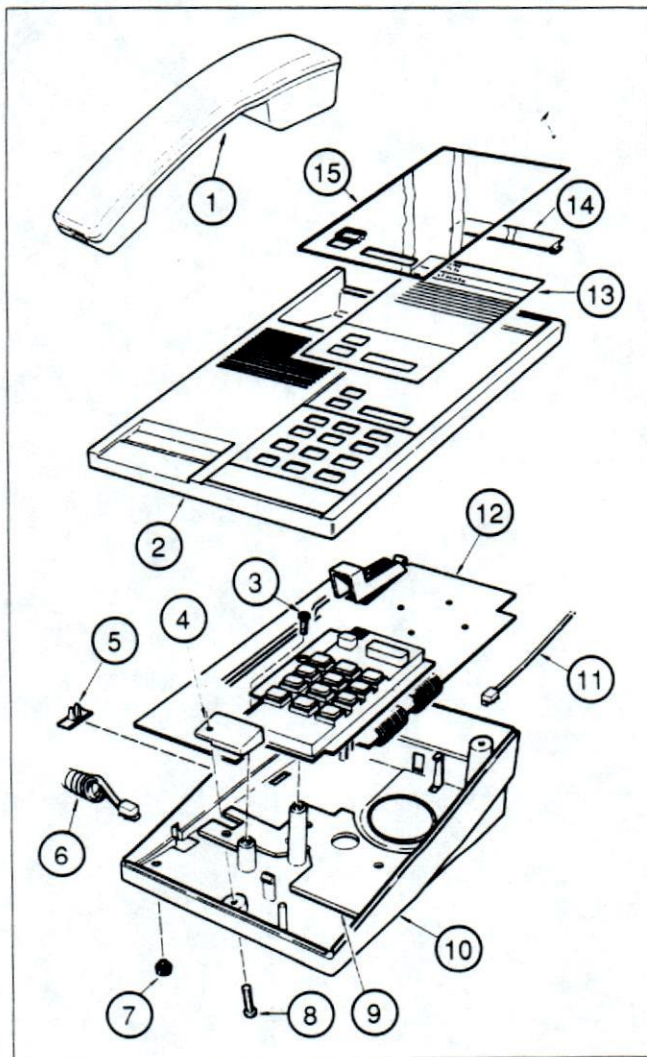
## Feature Highlights:

- LINK\*, hookswitch flash key
- Changeable personal directory
- Compatible with PBX, CO & stand-alone Centrex
- Matte finish
- Hearing aid compatible
- Equipped with 2.0m handset cord and 2.0m line cord
- "A" lead control
- Hi/Lo/Off tone alerter adjustments & differentiated ring control
- Message waiting
- Private brand label "logo" inserts available
- Wall mountable with optional kit
- Visual ringing indication
- Line release button

## General Specifications:

- Materials: High impact ABS plastic housing/base/handset
- Cords: 2.0M NE-H4DUQB Color, handset cord  
2.0M NE-D2QB87, line cord
- Alerter: Adjustable, electronic, tone alerter;
- Handset: NT0C09ED-XX, less cord, w/flux coil receiver, electret transmitter
- Indicators: Neon
- Timing: Release: 2200 mS  $\pm$  250 ms  
LINK; 500 mS  $\pm$  100 ms
- DOC No: 332 849A, Ringer Load #10A
- NTP No: Northern Telecom Practice No: 503-2001-203
- Guide: P0647975, Installation, Programming Guide

## Exploded View:



## List of Parts:

|    |                                  |            |
|----|----------------------------------|------------|
| 1  | Handset-BTS                      | NTOCO9BA-- |
|    | - NORSTAR(shown)                 | NTOCO9ED-- |
| 2  | Housing                          | P06500--   |
| 3  | Screw                            | P0601316   |
| 4  | Weight                           | P0697348   |
| 5  | Volume Control Button            | P06482--   |
| 6  | Handset Cord (2.0 M)             | H4DUQB--   |
| 7  | Foot                             | P0633565   |
| 8  | Screw                            | P0601001   |
| 9  | Weight                           | P0662347   |
| 10 | Base                             | P06720--   |
| 11 | Line Cord NT-D2QB-87 (2.0m)      | A0293344   |
| 12 | Network/Dial NTOC18AL            | A0326432   |
| 13 | Mat - English                    | P0644185   |
|    | - French                         | P0647999   |
| 14 | NT Logo Insert (Brandlin Window) | P06463--   |
| 15 | Faceplate                        | P0644165   |
| !  | Installation & Programming Guide | P0647975   |
| !  | Kit Wall Mount - Set Only        | NTOC2215-- |
|    | - E/W Access                     | NTOC3007-- |
| !  | PBX Feature Access Card- Eng.    | P0659315   |
|    | - Fr.                            | P0659316   |

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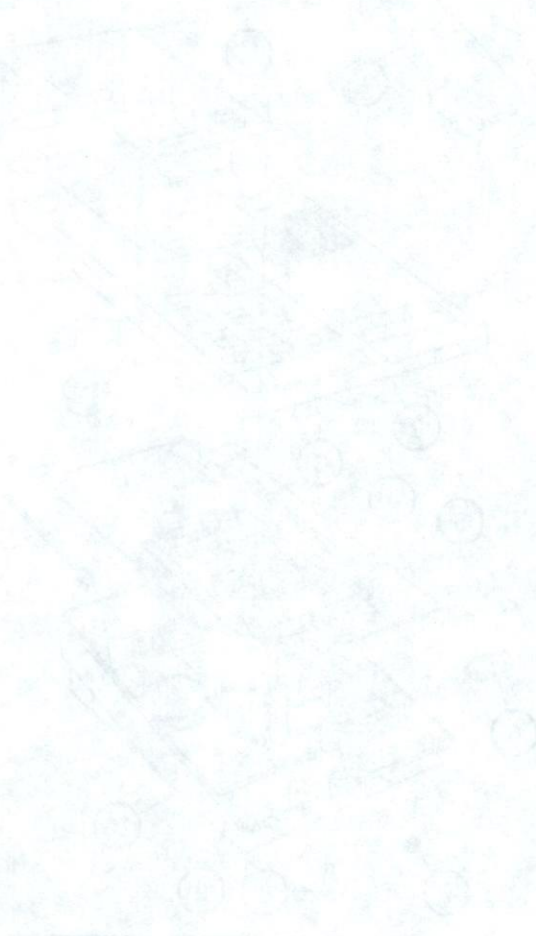
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1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the problem and the objectives of the research. It also mentions the scope of the study and the methods used.

2. The second part of the report is a detailed description of the experimental work. It includes a description of the apparatus used, the procedure followed, and the results obtained. It also discusses the errors and uncertainties involved in the measurements.

3. The third part of the report is a discussion of the results. It compares the results with the theoretical predictions and with the results of other experiments. It also discusses the implications of the results and the conclusions drawn from the study.

4. The fourth part of the report is a summary of the work. It briefly reviews the main points of the report and states the conclusions. It also mentions the limitations of the study and the suggestions for further work.





# UNITY MESSAGE WAITING



## Ordering Information:

| ORDERING CODE              | COLOUR                | CPC No.                  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|----------------------------|-----------------------|--------------------------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| NTOC22DC-03<br>NTOC22DC-67 | Black<br>Almond       | A0358716 *<br>A0358715 * | Stock                | 4                       | 1.0                     | 9 x 6 x 3.5                                |
|                            | * E/W NORSTAR HANDSET |                          |                      |                         | 0.5<br>(KILOGRAMS)      | 23 x 15 x 9<br>(CENTIMETERS)               |

## Description:

Unity® Message Waiting is an economical message waiting set with advanced, compact modern styling. Unity Message Waiting is available in almond, a carefully chosen colour to match virtually all decor. It is also available in modern "high tech" black. The Unity Message Waiting can be fitted with customized directory cards for listing hotel/motel services. Brand line inserts can be customized with the customer's Logo. Unity message waiting is a fully electronic set, designed and manufactured to meet stringent Telephone Company standards.

TO THE PRESIDENT OF THE UNITED STATES  
FROM THE SECRETARY OF THE ARMY  
SUBJECT: [Illegible]

[Illegible text block]



# UNITY MESSAGE WAITING

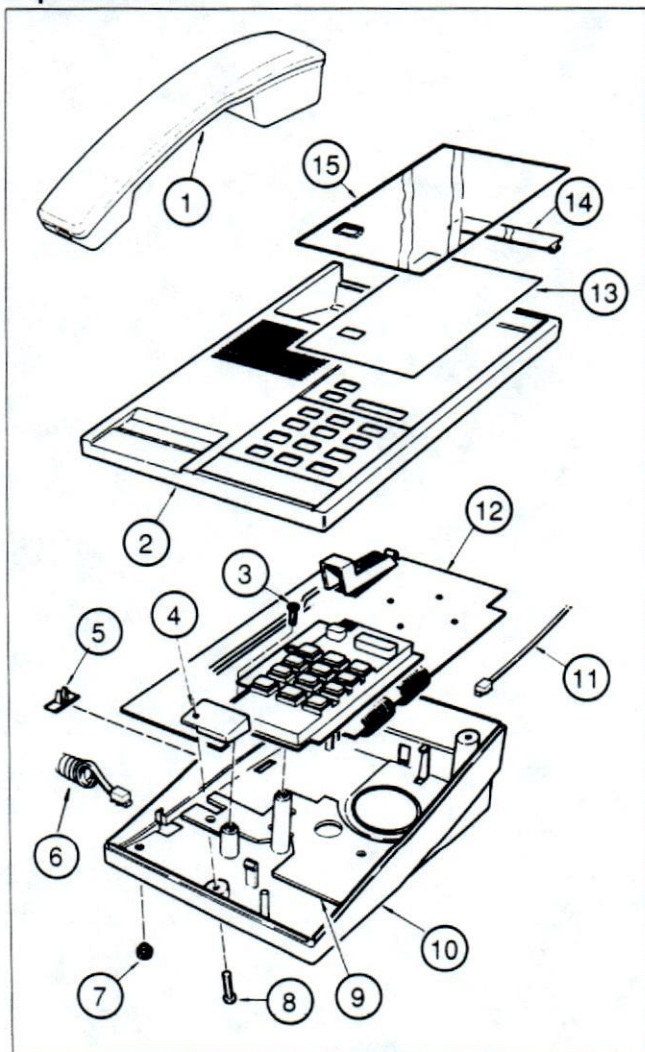
## Feature Highlights:

- Fully modular
- Changeable Hotel/Motel directory
- Compatible with PBX
- Matte finish
- Hearing aid compatible
- Adjustable non-cut-off electronic alerter
- Wall mountable with optional kit.
- Equipped with 2.0m handset cord and 2.0m line cord.
- Long life neon message waiting lamp.

## General Specifications:

- Materials: High impact ABS plastic housing/base/handset
- Cords: 2.5M NE-H4DUQB-Color, handset cord  
2.5M NE-D6QT-87, line cord
- Alerter: Adjustable, electronic, tone alerter
- Handset: NTOC09ED-XX, less cord, w/flux coil receiver, electret transmitter
- Power: A0336163 AC w/modular "T" adapter.
- Timing: LINK; 500 ms $\pm$ 100 ms  
Release; 2200 ms  $\pm$ 250 ms
- DOC No: 332 849A, Ringer Load #10A
- NTP No: Northern Telecom Practice No: 503-2001-214
- Guide: P0662316, Installation, Programming Guide

## Exploded View:



## List of Parts:

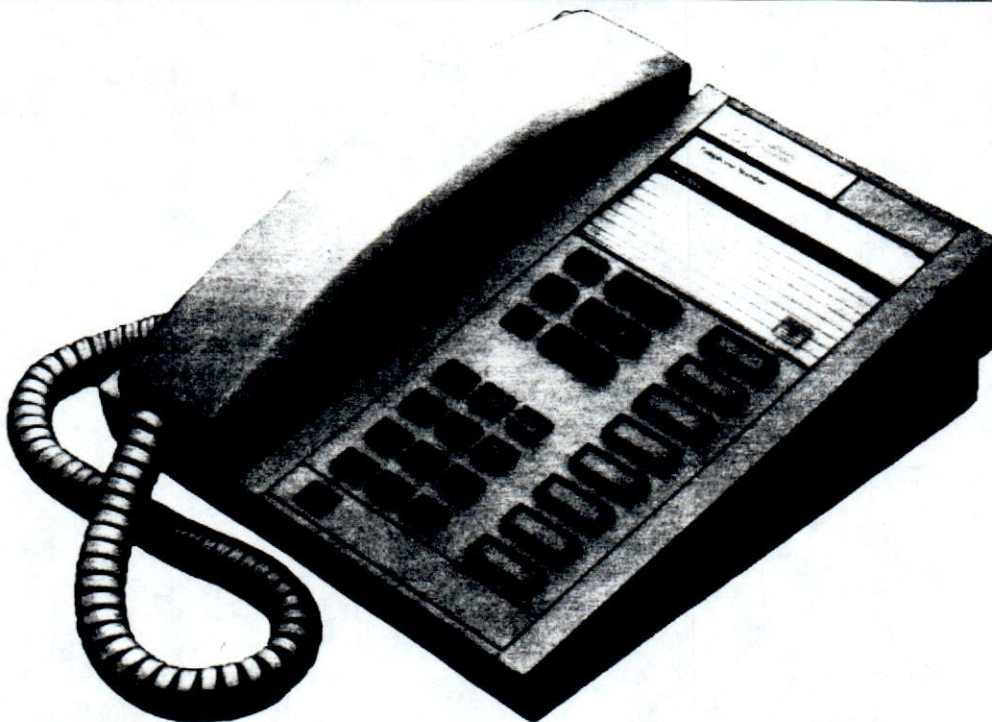
|    |                                   |            |
|----|-----------------------------------|------------|
| 1  | Handset - BTS                     | NTOC09BA-- |
|    | - NORSTAR(shown)                  | NTOC09ED-- |
| 2  | Housing                           | P06500--   |
| 3  | Screw                             | P0601316   |
| 4  | Weight                            | P0697348   |
| 5  | Volume Control Button             | P06482--   |
| 6  | Handset Cord (2.0M)               | H4DUQB--   |
| 7  | Foot                              | P0633565   |
| 8  | Screw                             | P0601001   |
| 9  | Weight                            | P0662347   |
| 10 | Base                              | P06444--   |
| 11 | Line Cord NT-D2QB-87 (2.0m)       | A0293344   |
| 12 | Dial/Network NTOC18AP             | A0326806   |
| 13 | Mat - English                     | P0662317   |
|    | - French                          | P0662318   |
| 14 | NT Logo Insert (Brandline Window) | P06463--   |
| 15 | Faceplate                         | P0662319   |
| !  | Installation & Programming Guide  | P0647975   |
| !  | Kit Wall Mount - Set Only         | NTOC2215-- |
|    | - E/W Acces.                      | NTOC3007-- |

! Not Shown (For Information Only)  
-- Add the appropriate colour code





# UNITY PLUS



## Ordering Information:

| ORDERING CODE              | COLOUR                                           | CPC No.                  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|----------------------------|--------------------------------------------------|--------------------------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| VTOC22DD-03<br>NTOC22DD-35 | Black<br>Chameleon Grey<br>* E/W NORSTAR HANDSET | A0358718 *<br>A0358717 * | Stock<br>Stock       | 4                       | 11                      | 15 x 9 x 8                                 |
|                            |                                                  |                          |                      |                         | 5.0<br>(KILOGRAMS)      | 38 x 23 x 20<br>(CENTIMETERS)              |

## Description:

The Unity Plus® provides all the features, benefits of Unity II, plus those that research has indicated business wants most in a single line telephone. Unity Plus makes it possible to enjoy single-button access to PBX, Centrex system features and/or personal speed call numbers, by programming any of 8 buttons with up to 16 digits, including LINK and Pause. The feature-in-use indicator will tell you when you have left your phone in the "Call-forward" mode so you won't miss important calls. Unity Plus has "A" lead control and can be used with 1A2 key systems. Unity Plus can be combined with Unity accessories such as Amplified Receive Module, and Headset Module to meet a variety of business needs.





# UNITY PLUS

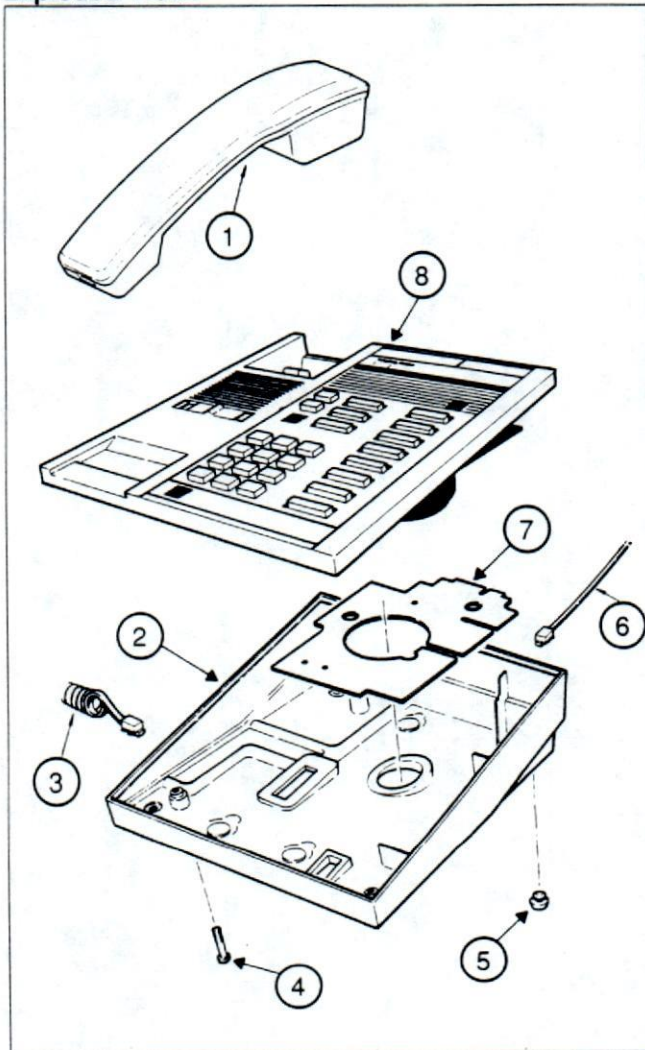
## Feature Highlights:

- Fully Modular
- Matte finish
- LINK hookswitch flash key
- Line release key
- Electronic Hold with remote release
- 8 programmable speed call/feature keys
- Feature-in-use indicator
- 4 position alerter switch with "off" setting.
- Differentiated tone alerter control
- Visual ring and message waiting indication.
- "A" lead control for 1A2 type key systems
- CO/PBX switch to optimize transmission
- Long life Lithium battery for reliable memory retention
- Equipped with 2.0m handset cord and 2.0m line cord
- Wall mountable with optional kit
- Hearing aid compatible

## General Specifications:

- Materials: High impact ABS plastic housing/base/handset
- Cords: 2.0M NE-H4DUQB-XX, handset cord  
2.0M NE-D4BUQB-87, line cord
- Alerter: Adjustable, electronic, tone alerter
- Timing: Link: 500 ms  $\pm$  100 ms  
Release: 2300 ms  $\pm$  500 ms
- Handset: NTOC09ED-XX, less cord, w/flux coil receiver, electret transmitter
- DOC No: 332 849A, Ringer Load # 10A
- NTP No: Northern Telecom Practice No: 503-200-1215
- Guide: P0662314, Installation, Programming Guide

## Exploded View:



## List of Parts:

|   |                                             |                          |
|---|---------------------------------------------|--------------------------|
| 1 | Handset -BTS<br>- NORSTAR (Shown)           | NTOC9BA--<br>NTOC9ED--   |
| 2 | Base - Black<br>- Chameleon Grey            | P0703042<br>P0661999     |
| 3 | Handset Cord (2.0M)                         | H4DUQB--                 |
| 4 | Screw                                       | P0601001                 |
| 5 | Foot                                        | P0633565                 |
| 6 | Line Cord NT-D2QB-87 (2.0M)                 | A0293344                 |
| 7 | Weight                                      | P0662312                 |
| 8 | Housing Assy                                | NTOC2207--               |
| ! | Installation & Programming<br>Guide         | P0662314                 |
| ! | Kit Printed Key Cap                         | P0677403                 |
| ! | Key Designation Label                       | P0662315                 |
| ! | Window Key Cap Kit                          | P0677402                 |
| ! | Kit Wall Mount - Set Only<br>- E/W Access.. | NTOC2215--<br>NTOC3007-- |

! Not Shown (For Information Only)  
-- Add the appropriate colour code





# UNITY SE



## Ordering Information:

| ORDERING CODE | COLOUR               | CPC No.    | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|---------------|----------------------|------------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| TOC22AK-03    | Black                | A0357552   | Stock                | 4                       | 10                      | 12 x 9 x 8                                 |
| TOC22AK-35    | Chameleon Grey       | A0347592   | Stock                |                         |                         |                                            |
| NTOC22AP-03   | Black                | A0387853** | Stock                |                         | 5.0                     | 31 x 23 x 20                               |
| NTOC22AP-35   | Chameleon Grey       | A0387854** |                      |                         | (KILOGRAMS)             | (CENTIMETERS)                              |
|               | ** E/W CO/PBX SWITCH |            |                      |                         |                         |                                            |

## Description:

We asked entrepreneurs what features they wanted most in a single-line business phone. The result is Unity SE®, the telephone set which is changing the face of small business with the many features needed most to make each business day more efficient and productive. With Unity SE, you get the best in business technology - at an affordable price to help you control monthly costs. Unity SE also provides fast and simple access to time-saving Custom Calling Features.





# UNITY SE

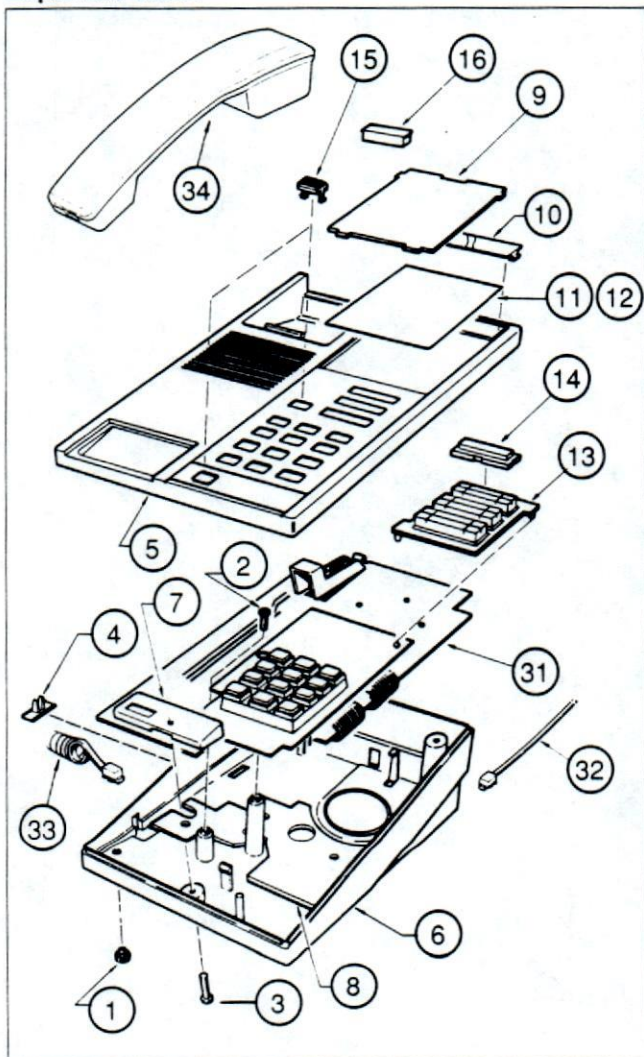
## Feature Highlights:

- Fully Modular
- Matte finish
- LINK hookswitch flash key
- Line release button
- Electronic Hold with remote release
- Hold indicator lamp
- 4 position alerter switch with "off" setting
- Message waiting
- Differentiated tone alerter control
- Changeable directory card
- Redial Button (up to 32 digits)
- Equipped with 2.0m handset cord and 2.0m line cord
- Wall mountable with optional kit
- Private brand "logo" inserts available
- Hearing aid compatible

## General Specifications:

- Materials: High impact ABS plastic housing/base/handset
- Cords: 2.0m NE-H4DUQB-XX, handset cord  
2.0m NE-D4BUQA-87, line cord
- Alerter: Adjustable, electronic, tone alerter:
- Handset: NT0C09ED-XX, less cord, w/flux coil receiver, electret transmitter
- Timing: Link: 400ms - 650ms
- DOC No: 332 849A, Ringer Load # 10A
- NTP No: Northern Telecom Practice No: 503-2001-237
- Guide: P0647975, Installation, Programming Guide

## Exploded View:



## List of Parts:

|    |                                  |            |
|----|----------------------------------|------------|
| 1  | Foot                             | P0633565   |
| 2  | Screw                            | P0601316   |
| 3  | Screw                            | P0601001   |
| 4  | Volume Control Button            | P06482--   |
| 5  | Housing                          | P07609--   |
| 6  | Base                             | P06720--   |
| 7  | Weight                           | P0697348   |
| 8  | Weight                           | P0662347   |
| 9  | Face Plate                       | P0693581   |
| 10 | NT Logo Insert                   | P06463--   |
| 11 | Directory Number/Index Card-Eng. | P0694390   |
|    | - Fr.                            | P0696233   |
| 12 | Alerter Assy                     | P0694868   |
| 13 | Elastomer Membrane               | P0693583   |
| 14 | Key Stud                         | P0679598   |
| 15 | Lens                             | P0671796   |
| 16 | Kit Printed Key Cap              | P0677403   |
| 31 | Printed Circuit Board NT0C14EJ   | A0340044   |
| 32 | Line Cord NT-D2QB-87 (2.0M)      | A0293344   |
| 33 | Handset Cord (2.0M)              | H4DUQB--   |
| 34 | Handset                          | NT0C9ED--  |
| !  | Installation & Programming Guide | P0695241   |
| !  | Kit Wall Mount - Set Only        | NT0C02215- |
|    | - E/W Acces.                     | NT0C3007-- |

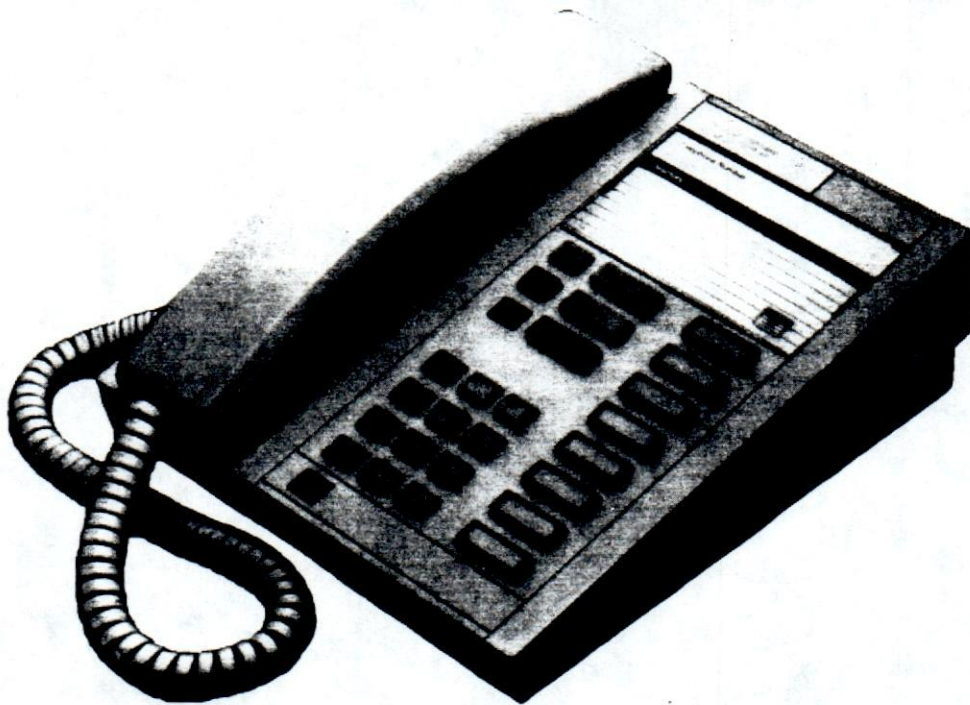
! Not Shown (For Information Only)

-- Add the appropriate colour code





# UNITY SE PLUS



## Ordering Information:

| ORDERING CODE | COLOUR               | CPC No     | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|---------------|----------------------|------------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| OC22AL-03     | Black                | A0357555   | Stock                | 4                       | 10                      | 12 x 9 x 8                                 |
| OC22AL-35     | Chameleon Grey       | A0347591   | Stock                |                         |                         |                                            |
| NTOC22AN-03   | Black                | A0373504** | Stock                |                         | 5.0                     | 31 x 23 x 20                               |
| NTOC22AN-35   | Chameleon Grey       | A0373505** | Stock                |                         | (Kilograms)             | (CENTIMETERS)                              |
|               | ** E/W CO/PBX SWITCH |            |                      |                         |                         |                                            |

## Description:

Unity SE Plus® was created with one goal in mind: to meet the changing needs of small businesses. It's fully equipped with all kinds of time-saving features to help you keep in touch with customers, and on top of business. Like all successful entrepreneurs, Unity SE Plus has a mind of its own, you can record numbers for fast, efficient speed dialling, or put Custom Calling access codes into the memory for quick simplified access to these features. Unity SE Plus lets you work more professionally.





# UNITY SE PLUS

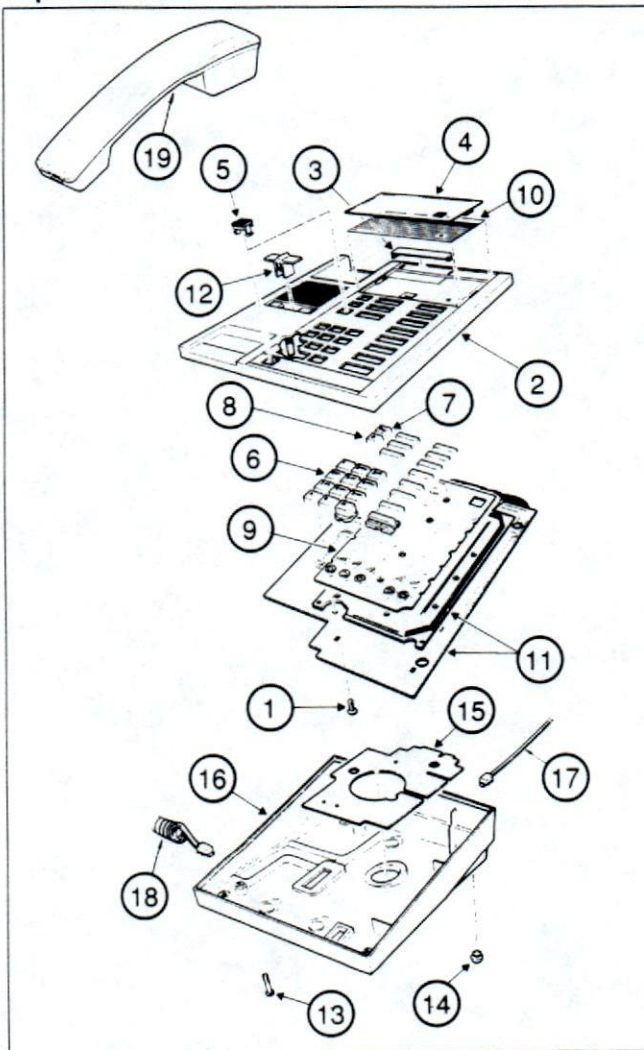
## Feature Highlights:

- Fully Modular
- Matte finish
- LINK hookswitch flash key
- Line release key
- Electronic Hold with remote release
- 8 programmable speed call/feature keys
- Feature-in-use indicator
- 4 position alerter switch with "off" setting.
- Differentiated tone alerter control
- Visual ring and message waiting indication.
- Long life Lithium battery for reliable memory retention
- Equipped with 2.0m handset cord and 2.0m line cord
- Wall mountable with optional kit
- Hearing aid compatible

## General Specifications:

- Materials: High impact ABS plastic housing/base/handset
- Cords: 2.0m NE-H4DUQB-XX, handset cord  
2.0m NE-D4BUQA-87, line cord
- Alerter: Adjustable, electronic, tone alerter:
- Handset: NT0C09ED-XX, less cord, w/flux coil receiver, electret transmitter
- Timing Link: 400ms - 650ms
- DOC No: 332 849A, Ringer Load # 10A
- NTP No: Northern Telecom Practice No: 503-2001-238
- Guide: P0690519, User Guide

## Exploded View:



## List of Parts:

|    |                                   |            |
|----|-----------------------------------|------------|
| 1  | Screw                             | P0601316   |
| 2  | Housing- Black                    | P0703041   |
|    | - Chameleon Grey                  | P0661998   |
| 3  | NT Logo Insert (Brandline Window) | P0646335   |
| 4  | Faceplate                         | P0671750   |
| 5  | Lens                              | P0671796   |
| 6  | Key Tree                          | P0698795   |
| 7  | Pause Button                      | P0662310   |
| 8  | Release Button                    | P0690874   |
| 9  | Elastomer Membrane                | P0671759   |
| 10 | Designation Card-English          | P0662307   |
|    | -French                           | P0662308   |
| 11 | P.C.B. Assy. NT0C14EH             | A0338650   |
| 12 | Alerter Actuator                  | P0671751   |
| 13 | Screw                             | P0601001   |
| 14 | Foot                              | P0633565   |
| 15 | Weight                            | P0662312   |
| 16 | Base - Black                      | P0703042   |
|    | - Chameleon Grey                  | P0661999   |
| 17 | Line Cord NT.D2QB-87              | A0293344   |
| 18 | Handset Cord (2.0m)               | H4DUQB--   |
| 19 | Handset                           | NT0C09ED-- |
| !  | User Guide                        | P0690519   |
| !  | Key Cap Kit                       | P0677403   |
| !  | Key Designation Label             | P0662315   |
| !  | Kit Wall Mount - Set Only         | NT0C02215- |
|    | - E/W Acces.                      | NT0C3007-- |

! Not Shown

-- Add the appropriate colour code

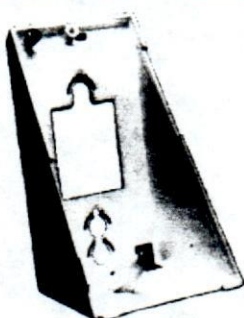




# UNITY ACCESSORIES:

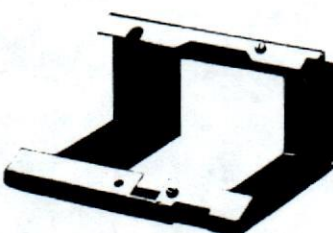
## WALL MOUNT KIT: UNITY I, II, M/W, UNITY PLUS (LESS ACCESSORIES)

Ordering Information:

|  | Ordering Code              | Colour                  | CPC #                | General Availability |
|-----------------------------------------------------------------------------------|----------------------------|-------------------------|----------------------|----------------------|
|                                                                                   | NTOC2215-03<br>NTOC2215-35 | Black<br>Chameleon Grey | A0370313<br>A0342537 | Stock<br>Stock       |

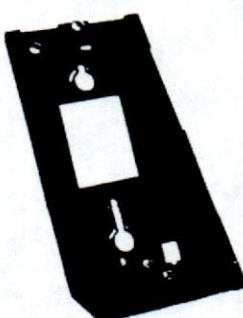
## WALL MOUNT KIT: UNITY I, II, M/W, UNITY PLUS (E/W ACCESSORIES)

Ordering Information:

|  | Ordering Code | Colour                 | CPC #    | General Availability |
|-----------------------------------------------------------------------------------|---------------|------------------------|----------|----------------------|
|                                                                                   | NTOC3007-35   | Not Colour Significant | A0341086 | Stock                |

## WALL MOUNT KIT: UNITY HANDSFREE & 2 LINE

Ordering Information:

|                                                                                                                      | Ordering Code              | Colour                  | CPC #                | General Availability |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------|----------------------|----------------------|
|                                                                                                                                                                                                         | NT4L07AD-03<br>NT4L07AD-35 | Black<br>Chameleon Grey | A0348497<br>A0348498 | Stock<br>Stock       |
| <small>AVAILABLE FROM<br/>NORTHERN TELECOM CANADA LIMITED<br/>TELECOM DISTRIBUTION DIVISION<br/>105 LAURENTIAN BLVD., ST. LAURENT,<br/>QUEBEC H4N 2M3<br/>Tel.(514) 747-5551 Fax.(514) 744-8771</small> |                            |                         |                      |                      |

# PROPERTY TAX

THE BOARD OF SUPERVISORS OF THE COUNTY OF ALBANY, NEW YORK

| NAME OF TAXPAYER | ADDRESS      | ASSESSMENT | TAX  |
|------------------|--------------|------------|------|
| JOHN J. SMITH    | 123 MAIN ST. | 100.00     | 1.20 |
| JANE D. SMITH    | 456 MAIN ST. | 150.00     | 1.80 |
| WILLIAM B. SMITH | 789 MAIN ST. | 200.00     | 2.40 |
| MARY E. SMITH    | 101 MAIN ST. | 50.00      | .60  |
| CHARLES F. SMITH | 202 MAIN ST. | 75.00      | .90  |

THE BOARD OF SUPERVISORS OF THE COUNTY OF ALBANY, NEW YORK

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THE BOARD OF SUPERVISORS OF THE COUNTY OF ALBANY, NEW YORK

THE BOARD OF SUPERVISORS OF THE COUNTY OF ALBANY, NEW YORK



# UNITY ACCESSORIES:

## HANDSET: BTS.

### Ordering Information:

|  | Ordering Code | Colour         | CPC #    | General Availability |
|-----------------------------------------------------------------------------------|---------------|----------------|----------|----------------------|
|                                                                                   | NTOCO9BA-03   | Black          | A0327105 | Stock                |
|                                                                                   | NTOCO9BA-35   | Chameleon Grey | A0302448 | Stock                |
|                                                                                   | NTOCO9BA-67   | Almond         | A0326803 | Stock                |
|                                                                                   | NTOCO9BA-93   | Light Grey     | A0302449 | Stock                |

## HANDSET: BTS (NOISY LOCATION)

### Ordering Information:

|  | Ordering Code                                                                                                                                                                                                | Colour         | CPC #    | General Availability |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|----------------------|
|                                                                                     | NTOCO9BB-03                                                                                                                                                                                                  | Black          | A0339939 | Stock                |
|                                                                                     | NTOCO9BB-35                                                                                                                                                                                                  | Chameleon Grey | A0318334 | Stock                |
|                                                                                     | NTOCO9BB-93                                                                                                                                                                                                  | Light Grey     | A0348398 | Stock                |
|                                                                                     | <small>AVAILABLE FROM<br/> NORTHERN TELECOM CANADA LIMITED<br/> TELECOM DISTRIBUTION DIVISION<br/> 105 LAURENTIAN BLVD., ST. LAURENT,<br/> QUEBEC H4N 2M3<br/> Tel.(514) 747-5551 Fax.(514) 744-8771</small> |                |          |                      |

## HANDSET: UNITY 'NORSTAR' STYLE HANDSET (FOR USE ON UNITY PRODUCTS)

### Ordering Information:

|  | Ordering Code | Colour         | CPC #    | General Availability |
|-------------------------------------------------------------------------------------|---------------|----------------|----------|----------------------|
|                                                                                     | NTOCO9ED-03   | Black          | A0358045 | Stock                |
|                                                                                     | NTOCO9ED-35   | Chameleon Grey | A0358046 | Stock                |
|                                                                                     | NTOCO9ED-67   | Almond         | A0358047 | Stock                |
|                                                                                     |               |                |          |                      |





# UNITY ACCESSORIES:

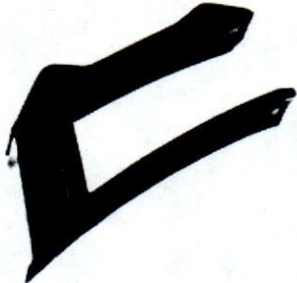
## HANDSET: NORSTAR (FOR USE ON NORSTAR AND OTHER DIGITAL TERMINALS)

### Ordering Information:

|  | Ordering Code | Colour         | CPC #    | General Availability |
|----------------------------------------------------------------------------------|---------------|----------------|----------|----------------------|
|                                                                                  | NTOCO9EA-03   | Black          | A0338908 | Stock                |
|                                                                                  | NTOCO9EA-2    | Bright Red     | A0339570 | Stock                |
|                                                                                  | NTOCO9EA-35   | Chameleon Grey | A0329173 | Stock                |
|                                                                                  | NTOCO9EA-93   | Light Grey     | A0329174 | Stock                |
|                                                                                  | NTOCO9EA-98   | Dark Grey      | A0339571 | Stock                |

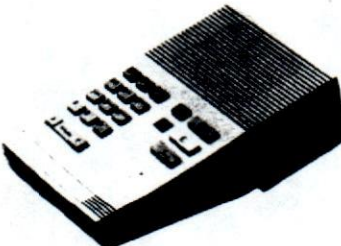
## SHOULDER REST:

### Ordering Information:

|                                                                                                   | Ordering Code | Colour         | CPC #    | General Availability |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------|----------|----------------------|
|                                                                                                                                                                                     | NTIFD4GA-03   | Black          | A0341689 | Stock                |
|                                                                                                                                                                                     | NTIFD4GA-35   | Chameleon Grey | A0338422 | Stock                |
|                                                                                                                                                                                     | NTIFD4GA-93   | Light Grey     | A0341690 | Stock                |
| AVAILABLE FROM<br>NORTHERN TELECOM CANADA LIMITED<br>TELECOM DISTRIBUTION DIVISION<br>105 LAURENTIAN BLVD., ST. LAURENT,<br>QUEBEC H4N 2M3<br>Tel.(514) 747-5551 Fax.(514) 744-8771 |               |                |          |                      |

## HANDSFREE: COMPANION 4L

### Ordering Information:

|                                                                                                   | Ordering Code | Colour         | CPC #    | General Availability |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------|----------|----------------------|
|                                                                                                                                                                                     | NTIL04AA-35   | Chameleon Grey | A0319967 | Stock                |
| AVAILABLE FROM<br>NORTHERN TELECOM CANADA LIMITED<br>TELECOM DISTRIBUTION DIVISION<br>105 LAURENTIAN BLVD., ST. LAURENT,<br>QUEBEC H4N 2M3<br>Tel.(514) 747-5551 Fax.(514) 744-8771 |               |                |          |                      |

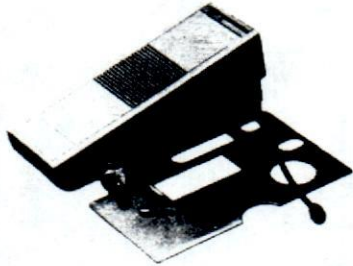




# UNITY ACCESSORIES:

## MODULE: AMPLIFIED RECEIVE

Ordering Information:

|  | Ordering Code                                                                                                                                                                                                                         | Colour                  | CPC #                | General Availability |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|----------------------|
|                                                                                   | NTOC30AD-03<br>NTOC30AD-35                                                                                                                                                                                                            | Black<br>Chameleon Grey | A0357568<br>A0329768 | Stock<br>Stock       |
|                                                                                   | <small>AVAILABLE FROM</small><br><b>NORTHERN TELECOM CANADA LIMITED</b><br><b>TELECOM DISTRIBUTION DIVISION</b><br><b>105 LAURENTIAN BLVD., ST. LAURENT,</b><br><b>QUEBEC H4N 2M3</b><br><b>Tel.(514) 747-5551 Fax.(514) 744-8771</b> |                         |                      |                      |

## MODULE: HEADSET

Ordering Information:

|  | Ordering Code                                                                                                                                                                                                                         | Colour                  | CPC #                | General Availability |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|----------------------|
|                                                                                    | NTOC30AB-03<br>NTOC30AB-35                                                                                                                                                                                                            | Black<br>Chameleon Grey | A0357567<br>A0318347 | Stock<br>Stock       |
|                                                                                    | <small>AVAILABLE FROM</small><br><b>NORTHERN TELECOM CANADA LIMITED</b><br><b>TELECOM DISTRIBUTION DIVISION</b><br><b>105 LAURENTIAN BLVD., ST. LAURENT,</b><br><b>QUEBEC H4N 2M3</b><br><b>Tel.(514) 747-5551 Fax.(514) 744-8771</b> |                         |                      |                      |





# RAPPORT : Hotel / Motel



## Ordering Information:

| ORDERING CODE | COLOUR | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|---------------|--------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| OC21AB-67     | Almond | A0320635 | Stock                | 4                       | 1.5                     | 8 x 6.25 x 3.25                            |
|               |        |          |                      |                         | 0.7<br>(KILOGRAMS)      | 20 x 16 x 8<br>(CENTIMETERS)               |

## Description:

Incorporating design suggestions from professionals in the hotel/motel industry, Rapport® sets provide top quality, reliable access to hotel/motel services. Available in neutral versatile almond, Rapport will enhance even the most upscale establishment. and will be seen as attractive, appropriate additions to any hotel room. Rapport sets provide solutions to everyday problems of mis-directed calls, through single button access of services. The programmable buttons can be revenue producers when leased to commercial establishments. Let Rapport sets help your guests, your staff & your bottom line.





# RAPPORT : Hotel / Motel

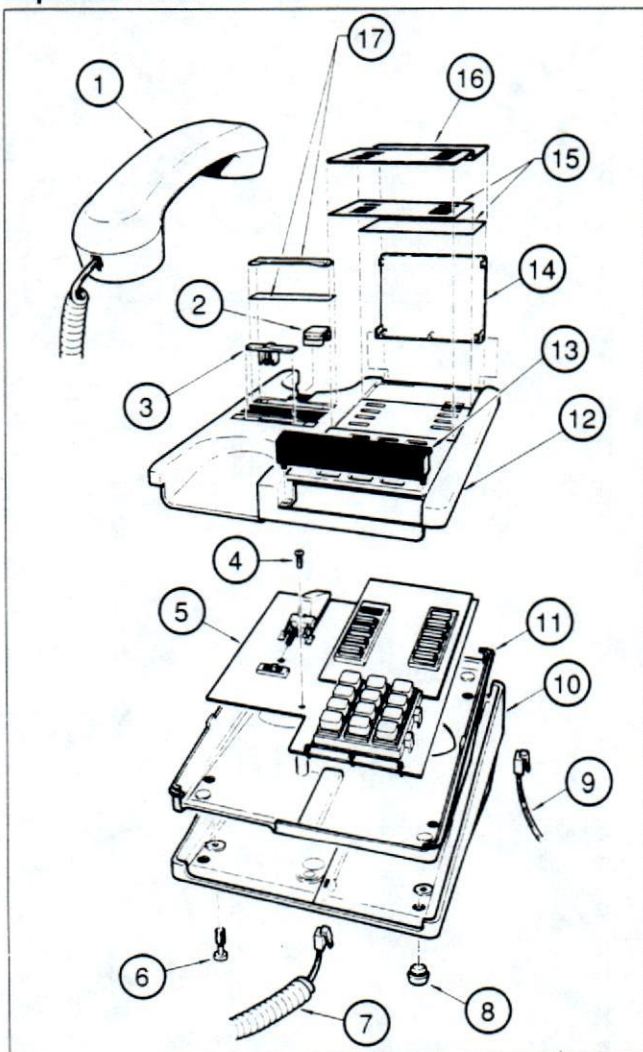
## Feature Highlights:

- Fully modular
- 8 programmable keys provide easy access to services
- Bright, bold message waiting / visual ring indicator
- Hidden programming key protected by faceplate
- Hi / Medium / Lo tone alerter cannot be shut off
- Hearing aid compatible
- Superior, inherent RFI / EMI protection
- Large directory / information card
- Clear plastic protective directory and room number cover
- 2.0m handset and 2.0m line cords\*
- Long life lithium battery for memory backup

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0m H4DUQB-XX handset cord  
2.0m D4QK-87 line cord
- Alerter: Hi/Medium/Lo tone alerter
- Handset: NTOC09CA-XX, less cord, w/flux coil receiver, electret transmitter
- DOC No: 332 1232A, Ringer Load # 10A
- NTP No: Northern Telecom Practice No: 503-2001-212
- Guide: P0661955 User Guide

## Exploded View:



## List of Parts:

|    |                                  |           |
|----|----------------------------------|-----------|
| 1  | Handset                          | NTOC9AA-- |
| 2  | Wall Mount Clip                  | P06592--  |
| 3  | Volume Control Button            | P0658152  |
| 4  | Screw                            | P0601316  |
| 5  | Network/Dial NTOC18AN            | A0326447  |
| 6  | Screw                            | P0601044  |
| 7  | Handset Cord (2.0M)              | H4DUQB--  |
| 8  | Foot                             | P0633565  |
| 9  | Line Cord NT-D2QB-87 (2.0M)      | A0293344  |
| 10 | Wedge                            | P06567--  |
| 11 | Base (Bright Red)                | P0658223  |
| 12 | Housing e/w Lens                 | P06645--  |
| 13 | Lens                             | P0644186  |
| 14 | Lid                              | P06570--  |
| 15 | Mat                              | P0644193  |
| 16 | Faceplate                        | P0644187  |
| 17 | Card Holder Group                | P0633569  |
| !  | Installation & Programming Guide | P0661955  |

! Not Shown (For Information Only)  
-- Add the appropriate colour code





**RAPPORT PLUS:** Hotel / Motel

### Ordering Information:

| ORDERING CODE              | COLOUR          | CPC No.              | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS)      | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL          |
|----------------------------|-----------------|----------------------|----------------------|-------------------------|------------------------------|-----------------------------------------------------|
| ITOC21AE-03<br>ITOC21AE-67 | Black<br>Almond | A0329800<br>A0329790 | Stock                | 4                       | 1.5<br><br>.7<br>(KILOGRAMS) | 8 x 6.25 x 3.25<br><br>20 x 16 x 8<br>(CENTIMETERS) |

**Description:**

Incorporating design suggestions from professionals in the hotel/motel industry, Rapport Plus® sets provide top quality, reliable access to hotel/motel services. Rapport Plus features a built-in RJ11 parallel data access jack for direct interface for computer-to-computer communications and a LINK (hookswitch flash) button for simplified activation of CALL WAITING. Available in almond and black, Rapport Plus will enhance even the most upscale establishment, and will be seen as attractive, appropriate addition to any hotel room. Rapport Plus sets provide solutions to everyday problems of misdirected calls, through single button access of services. The programmable buttons can be revenue producers when leased to commercial establishments. Let Rapport Plus sets help your guests, your staff & your bottom line.



1. The purpose of this report is to provide a comprehensive overview of the project's progress and findings. The report is organized into several sections, each detailing a specific aspect of the project.

2. The first section, titled "Introduction," provides a brief overview of the project's goals and objectives. It also discusses the importance of the project and the role of the research team.

3. The second section, titled "Methodology," describes the research methods used in the project. This includes a discussion of the data collection process, the analysis techniques, and the tools used for data management.

4. The third section, titled "Results," presents the findings of the project. This section includes a detailed discussion of the data collected, the results of the analysis, and the conclusions drawn from the findings.

5. The fourth section, titled "Discussion," provides a critical analysis of the results. It discusses the strengths and weaknesses of the study, the implications of the findings, and the limitations of the research.

6. The fifth section, titled "Conclusion," summarizes the key findings of the project and provides recommendations for future research. It also discusses the overall impact of the project and the contributions made by the research team.

7. The final section, titled "References," lists the sources used in the project. This includes a list of books, articles, and other documents that were consulted during the research process.



# RAPPORT PLUS: Hotel / Motel

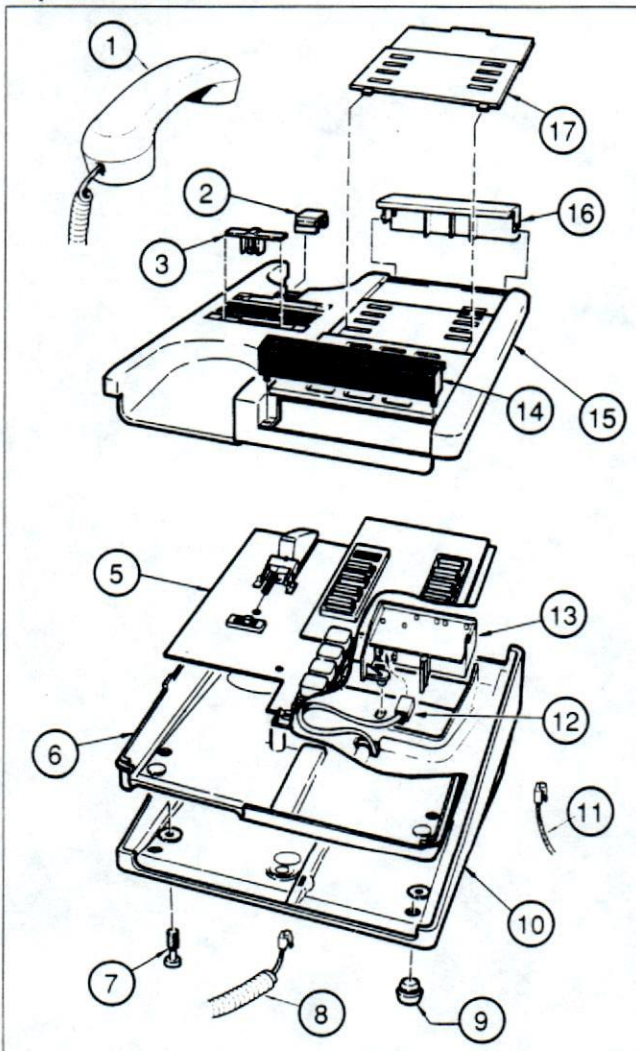
## Feature Highlights:

- Fully modular
- Parallel RJ11 jack for personal computer
- LINK key to access call waiting
- 7 programmable keys provide easy access to services
- Bright, bold message waiting / visual ring indicator
- Hidden programming key protected by faceplate
- Hi / Medium / Lo tone alerter cannot be shut off
- Hearing aid compatible
- Superior, inherent RFI / EMI protection
- Large directory / information card
- Clear plastic protective directory and room number cover
- 2.0m handset and 2.0m line cords\*
- Long life lithium battery for memory backup

## General Specifications:

- Materials: High impact ABS plastic housing/cover/handset
- Cords: 2.0m H4DUQB-XX handset cord  
2.0m D4QK-87 line cord
- Alerter: Hi/Medium/Lo tone alerter
- Timing: LINK: 500ms  $\pm$  100ms
- Handset: NT0C09CA-XX, less cord, w/flux coil receiver, electret transmitter
- DOC No: 332 1232A, Ringer Load #10A
- NTP No: Northern Telecom Practice No: 503-2001-219
- Guide: P0694409 User Guide

## Exploded View:



## List of Parts:

|    |                                  |           |
|----|----------------------------------|-----------|
| 1  | Handset                          | NTOC9AA-- |
| 2  | Wall Mount Clip                  | P06592-   |
| 3  | Volume Control Button            | P0658152  |
| 5  | Network/Dial NTOC18AR            | A0329797  |
| 6  | Base (bright Red)                | P0658223  |
| 7  | Screw                            | P0601044  |
| 8  | Handset Cord (2.0M)              | H4DUQB--  |
| 9  | Foot                             | P0633565  |
| 10 | Wedge                            | P06567--  |
| 11 | Line Cord NT-D2QB-87 (2.0M)      | A0293344  |
| 12 | Line Cord D4BUQA-87 (178mm)      | A0320615  |
| 13 | Data Jack Assy NTOC2105          | A0329796  |
| 14 | Lens                             | P0644186  |
| 15 | Housing e/w Lens                 | P06645--  |
| 16 | Brandline Lid                    | P06788--  |
| 17 | Faceplate                        | P0644187  |
| !  | Kit Data Jack                    | A0332792  |
| !  | Card Holder Group                | P0633569  |
| !  | Mat (Designation Card)           | P0678905  |
| !  | Installation & Programming Guide | P0694409  |

### NOTE:

For field conversions you must order  
A0332792 Kit Data Jack Conversion NTOC2106

- ! Not Shown (For Information Only)
- Add the appropriate colour code

1. The first part of the report is a general description of the project.

2. The second part of the report is a detailed description of the project.

3. The third part of the report is a detailed description of the project.

4. The fourth part of the report is a detailed description of the project.

5. The fifth part of the report is a detailed description of the project.

6. The sixth part of the report is a detailed description of the project.

7. The seventh part of the report is a detailed description of the project.

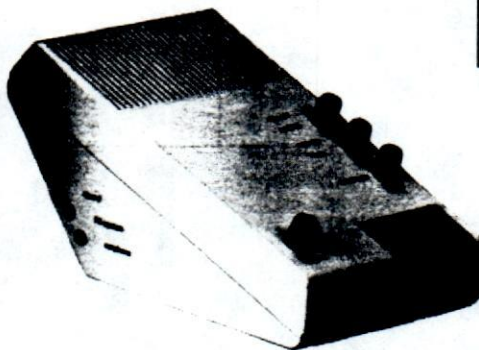
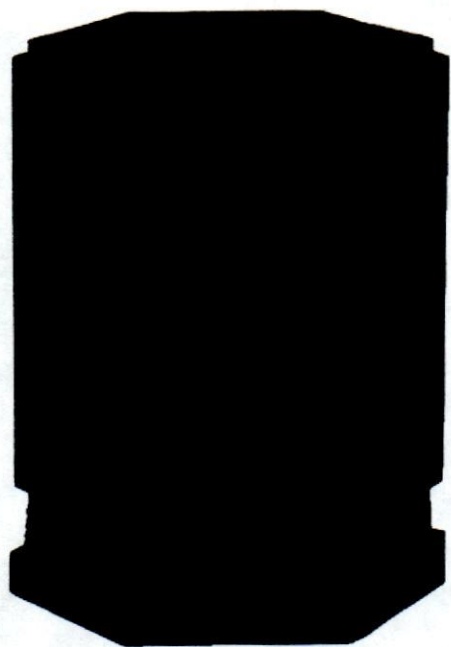
8. The eighth part of the report is a detailed description of the project.

9. The ninth part of the report is a detailed description of the project.

10. The tenth part of the report is a detailed description of the project.



# CONFERENCE 2000



AVAILABLE FROM  
NORTHERN TELECOM CANADA LIMITED  
TELECOM DISTRIBUTION DIVISION  
105 LAURENTIAN BLVD., ST. LAURENT,  
QUEBEC H4N 2M3  
Tel. (514) 747-5551 Fax. (514) 744-8771



## Ordering Information:

| ORDERING CODE | COLOUR         | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (INCHES) INDIVIDUAL |
|---------------|----------------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| TAF2B3-35     | Chameleon Grey | A0287454 | Stock                | 1                       | 20                      | 17 x 13 x 9                                |
|               |                |          |                      |                         | 9.0 (KILOGRAMS)         | 43 x 33 x 23 (CENTIMETERS)                 |

## Description:

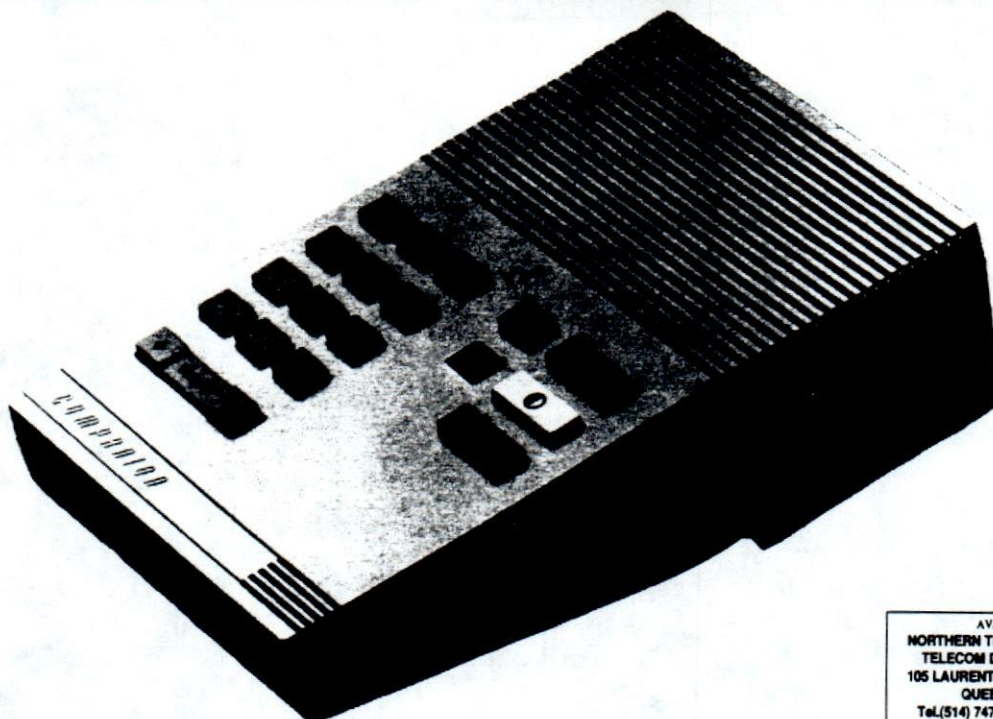
Conference 2000®, the complete conferencing system. Now you can conduct a phone conference with voice communication that is almost like being face-to-face. Easy to operate, permanent or portable and cost effective. (Each conference means a reduction in travel expense). The speaker is housed in a 12 inch high by 8 inch diameter walnut grain acoustic module. Its sensitive, omni-directional microphone, picks up your normal speaking voice from any direction in the room. Conference 2000 . . . what a way to travel!

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BUREAU OF THE  
CENSUS  
WASHINGTON, D. C.

| NAME       | AGE | SEX | RACE | RELATIONSHIP | EDUCATION | INDUSTRY      | WAGE    |
|------------|-----|-----|------|--------------|-----------|---------------|---------|
| JOHN DOE   | 35  | M   | W    | H            | HS        | MANUFACTURING | \$12.00 |
| JANE DOE   | 32  | F   | W    | WIFE         | HS        | MANUFACTURING | \$10.00 |
| JOHN SMITH | 45  | M   | W    | H            | HS        | MANUFACTURING | \$15.00 |
| JANE SMITH | 42  | F   | W    | WIFE         | HS        | MANUFACTURING | \$12.00 |
| JOHN BROWN | 55  | M   | W    | H            | HS        | MANUFACTURING | \$18.00 |
| JANE BROWN | 52  | F   | W    | WIFE         | HS        | MANUFACTURING | \$15.00 |
| JOHN GREEN | 65  | M   | W    | H            | HS        | MANUFACTURING | \$20.00 |
| JANE GREEN | 62  | F   | W    | WIFE         | HS        | MANUFACTURING | \$18.00 |
| JOHN BLACK | 75  | M   | W    | H            | HS        | MANUFACTURING | \$22.00 |
| JANE BLACK | 72  | F   | W    | WIFE         | HS        | MANUFACTURING | \$20.00 |



# COMPANION 4L: Dial Pad; LINK, Mute Keys;



AVAILABLE FROM  
NORTHERN TELECOM CANADA LIMITED  
TELECOM DISTRIBUTION DIVISION  
105 LAURENTIAN BLVD., ST. LAURENT,  
QUEBEC H4N 2M3  
Tel.(514) 747-5551 Fax.(514) 744-8771

## Ordering Information:

| ORDERING CODE | COLOUR         | CPC No.  | GENERAL AVAILABILITY | STANDARD ORDER QUANTITY | WEIGHT APPROX. (POUNDS) | MEASUREMENTS L x W x H (inches) INDIVIDUAL |
|---------------|----------------|----------|----------------------|-------------------------|-------------------------|--------------------------------------------|
| L04AA-03      | Black          | A0389012 | Stock                | 4                       | 1.0                     | 8 x 7 x 3                                  |
| L04AA-35      | Chameleon Grey | A0319967 |                      |                         | 0.5 (KILOGRAMS)         | 20 x 17.8 x 7.6 (CENTIMETERS)              |

## Description:

Companion® 4L handsfree speakerphones with LINK\* hookswitch flash key are designed for business or home applications. Digital microprocessor technology and improvements in acoustic design, result in voice quality that matches a conventional tel set. The "barrel" effect or hollow sound typically experienced with speakerphones is virtually eliminated. The ability to originate calls from the built-in dial pad and access features through the LINK key provide added conveniences uncommon to most speakerphones! No need to activate the telephone or lift the handset to originate or transfer a call! Locking mute function, visual indicators, rocker action volume control & "A" lead are other added value features. Companion 4L is for modular applications

## Feature Highlights:

- Digital voice control with improved acoustic design
- On-hook dialing
- Automatic transfer & self turnoff
- Line release button
- Mute key
- Prewired "A" lead control
- LINK, hookswitch flash, feature access button
- Power transformer included
- Compatible with virtually all single-line tel sets
- Rocker action volume control
- Soft, non-skid, non-mar rubber feet

## General Specifications:

- Materials: High impact ABS housing & base
- Cords: 2.1m NE-D8QT-87 modular cord
- Dial: DTMF, Digitone\*
- Speaker: 50 ohm, NT1L0409 assembly
- Transmit level: Equivalent to a 2500 type set
- Power: Wall transformer wired w/T\* adaptor A0320323 (Supplied with unit)
- Environment: 3 - 6' optimum distance from speaker
- Timing: LINK; 500mS ± 100mS
- DOC No: 332 1385A, Ringer Load #0
- NTP No: Northern Telecom Practice No: 512-6251-203
- Guide: P0657742, User guide

1. Name of the person  
2. Address  
3. City  
4. State  
5. Zip

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |
|   |   |   |   |   |   |   |   |   |    |

1. Name of the person  
2. Address  
3. City  
4. State  
5. Zip

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3. City  
4. State  
5. Zip

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2. Address  
3. City  
4. State  
5. Zip

1. Name of the person  
2. Address  
3. City  
4. State  
5. Zip



# TELADAPT 2000: MODULAR HARDWARE

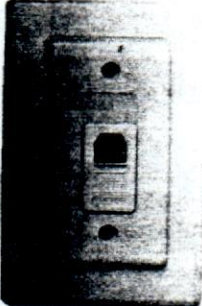
## JACK: BASEBOARD

### Ordering Information:

|  | Ordering Code | Description                                                                                                 | CPC #    | General Availability |
|-----------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                   | NTOC28AA-67   | 4-Conductor baseboard jack e/w snap on cover which has a shutter that closes automatically when not in use. | A0328349 | Stock                |
|                                                                                   | NTOC28AC-67   | Same as 28AA except 6-Conductor                                                                             | A0347909 | Stock                |

## JACK: WALL (PLASTIC)

### Ordering Information:

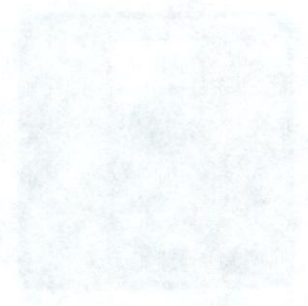
|  | Ordering Code | Description                                                                                                    | CPC #    | General Availability |
|------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                    | NTOC29AA-67   | 4-Conductor wall mounted jack e/w plastic cover which has a shutter that closes automatically when not in use. | A0328350 | Stock                |
|                                                                                    | NTOC29AC-67   | Same as 29AA except 6-Conductor                                                                                | A0329752 | Stock                |

## JACK: WALL (STAINLESS STEEL)

### Ordering Information:

|  | Ordering Code | Description                                                                                                            | CPC #    | General Availability |
|-------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                     | NTOC29CA      | 4-Conductor wall mounted jack e/w stainless steel cover, for use to wall mount telephone sets e/w appropriate adaptor. | A0347908 | Stock                |
|                                                                                     | NTOC29CC      | Same as 29CA except 6-Conductor                                                                                        | A0347907 | Stock                |

**NOTE:** TELADAPT 2000 WALL JACKS MIGHT REQUIRE - P0690725 SPACER

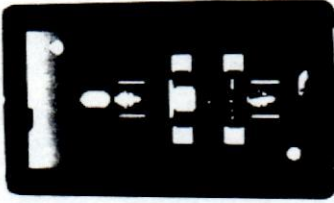




# TELADAPT: MODULAR HARDWARE

## ADAPTOR

### Ordering Information:

|  | Ordering Code | Description                                                                                                                                                                       | CPC #    | General Availability |
|----------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                  | NT-228QB      | ADAPTOR:<br>To adapt a 554 type telephone set for mounting and connection to a NT-630AQA type jack. Includes a bezel to improve the appearance of the telephone set installation. | A0259057 | Stock                |

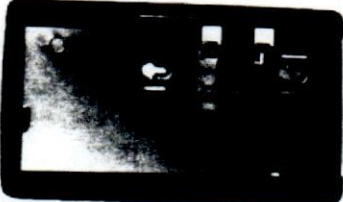
## ADAPTOR

### Ordering Information:

|  | Ordering Code | Description                                                                                                                                                                           | CPC #    | General Availability |
|-----------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                   | NT-228QC      | ADAPTOR:<br>Used with a NT-228A4 adaptor to adapt an AE#90 wall s/t for mounting and connection to a NT-630AQA -type jack, e/w a bezel to improve the appearance of the installation. | A0261590 | Stock                |

## ADAPTOR

### Ordering Information:

|  | Ordering Code | Description                                                                                                                                                                                              | CPC #    | General Availability |
|------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                    | NT-230QA4     | ADAPTOR<br>To adapt a Contempra type S/T for mounting and connection to a NT-630AQA-type jack. <b>Note:</b> Not intended to fully cover wall blemishes left by the removal of non-Teladapt installation. | A0248225 | Stock                |

| Year       | 1900  | 1901  | 1902  | 1903  | 1904  |
|------------|-------|-------|-------|-------|-------|
| Population | 1,000 | 1,100 | 1,200 | 1,300 | 1,400 |
| Area       | 100   | 110   | 120   | 130   | 140   |
| Per Capita | 10    | 11    | 12    | 13    | 14    |

| Year       | 1905  | 1906  | 1907  | 1908  | 1909  |
|------------|-------|-------|-------|-------|-------|
| Population | 1,500 | 1,600 | 1,700 | 1,800 | 1,900 |
| Area       | 150   | 160   | 170   | 180   | 190   |
| Per Capita | 15    | 16    | 17    | 18    | 19    |

| Year       | 1910  | 1911  | 1912  | 1913  | 1914  |
|------------|-------|-------|-------|-------|-------|
| Population | 2,000 | 2,100 | 2,200 | 2,300 | 2,400 |
| Area       | 200   | 210   | 220   | 230   | 240   |
| Per Capita | 20    | 21    | 22    | 23    | 24    |



# TELADAPT : MODULAR HARDWARE

## ADAPTOR

Ordering Information:

|  | Ordering Code | Description                                                                                                                                                                                                                                 | CPC #    | General Availability |
|-----------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                   | NT-230QC4     | ADAPATOR<br>Identical to the 230QA4 adaptor except that the retrofitted set is located in such a position on the wall so as to ensure maximum coverage of any wall blemishes left by the removal of the previous non-TELADAPT installation. | A0261591 | Stock                |

## BACKBOARD

Ordering Information:

|  | Ordering Code | Description                                                                                                                                                                                                                           | CPC #    | General Availability |
|------------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                    | NT-191BQA     | BACKBOARD<br>For optional use with a NT630AQA -type jack. Intende to compensate for the larger standoff when the NT-630AQA type jack is surface mounted using spacer (P0535403) May also be used to cover unpainted or damaged walls. | A0248249 | Stock                |

## JACK: OUTDOOR

Ordering Information:

|  | Ordering Code | Description                                                              | CPC #    | General Availability |
|-------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------|----------|----------------------|
|                                                                                     | NPS25092/1-A0 | JACK<br>Waterproof case e/w NT-625F type jack for external applications. | A0296969 | Stock                |

| TABLE I<br>Showing the results of the treatment of the cases of<br>diphtheria reported to the Health Department of<br>Chicago, 1916 |     | TABLE II<br>Showing the results of the treatment of the cases of<br>diphtheria reported to the Health Department of<br>Chicago, 1916 |     |
|-------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------|-----|
| No.                                                                                                                                 | Age | No.                                                                                                                                  | Age |
| 1                                                                                                                                   | 10  | 1                                                                                                                                    | 10  |
| 2                                                                                                                                   | 10  | 2                                                                                                                                    | 10  |
| 3                                                                                                                                   | 10  | 3                                                                                                                                    | 10  |
| 4                                                                                                                                   | 10  | 4                                                                                                                                    | 10  |
| 5                                                                                                                                   | 10  | 5                                                                                                                                    | 10  |
| 6                                                                                                                                   | 10  | 6                                                                                                                                    | 10  |
| 7                                                                                                                                   | 10  | 7                                                                                                                                    | 10  |
| 8                                                                                                                                   | 10  | 8                                                                                                                                    | 10  |
| 9                                                                                                                                   | 10  | 9                                                                                                                                    | 10  |
| 10                                                                                                                                  | 10  | 10                                                                                                                                   | 10  |

| TABLE III<br>Showing the results of the treatment of the cases of<br>diphtheria reported to the Health Department of<br>Chicago, 1916 |     | TABLE IV<br>Showing the results of the treatment of the cases of<br>diphtheria reported to the Health Department of<br>Chicago, 1916 |     |
|---------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------|-----|
| No.                                                                                                                                   | Age | No.                                                                                                                                  | Age |
| 1                                                                                                                                     | 10  | 1                                                                                                                                    | 10  |
| 2                                                                                                                                     | 10  | 2                                                                                                                                    | 10  |
| 3                                                                                                                                     | 10  | 3                                                                                                                                    | 10  |
| 4                                                                                                                                     | 10  | 4                                                                                                                                    | 10  |
| 5                                                                                                                                     | 10  | 5                                                                                                                                    | 10  |
| 6                                                                                                                                     | 10  | 6                                                                                                                                    | 10  |
| 7                                                                                                                                     | 10  | 7                                                                                                                                    | 10  |
| 8                                                                                                                                     | 10  | 8                                                                                                                                    | 10  |
| 9                                                                                                                                     | 10  | 9                                                                                                                                    | 10  |
| 10                                                                                                                                    | 10  | 10                                                                                                                                   | 10  |

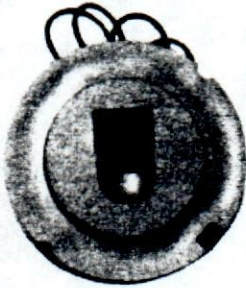
| TABLE V<br>Showing the results of the treatment of the cases of<br>diphtheria reported to the Health Department of<br>Chicago, 1916 |     | TABLE VI<br>Showing the results of the treatment of the cases of<br>diphtheria reported to the Health Department of<br>Chicago, 1916 |     |
|-------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------|-----|
| No.                                                                                                                                 | Age | No.                                                                                                                                  | Age |
| 1                                                                                                                                   | 10  | 1                                                                                                                                    | 10  |
| 2                                                                                                                                   | 10  | 2                                                                                                                                    | 10  |
| 3                                                                                                                                   | 10  | 3                                                                                                                                    | 10  |
| 4                                                                                                                                   | 10  | 4                                                                                                                                    | 10  |
| 5                                                                                                                                   | 10  | 5                                                                                                                                    | 10  |
| 6                                                                                                                                   | 10  | 6                                                                                                                                    | 10  |
| 7                                                                                                                                   | 10  | 7                                                                                                                                    | 10  |
| 8                                                                                                                                   | 10  | 8                                                                                                                                    | 10  |
| 9                                                                                                                                   | 10  | 9                                                                                                                                    | 10  |
| 10                                                                                                                                  | 10  | 10                                                                                                                                   | 10  |



# TELADAPT: MODULAR HARDWARE

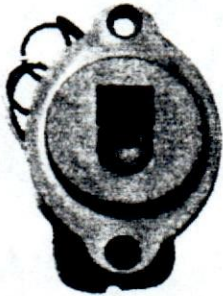
## JACK:

### Ordering Information:

|  | Ordering Code | Description                                                                                                                                                                                                   | CPC #    | General Availability |
|-----------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                   | NT-625QB4     | JACK<br>4-conductor jack intended for mounting in a NS-16151 L2 weatherproof jack (enclosure). May also be mounted in a variety of customer-provided, weatherproof outlet boxes by means of a NT43QA bracket. | A0253536 | Stock                |

## JACK: JIFFEY POLE

### Ordering Information:

|  | Ordering Code | Description                                                                                                                                                                                                     | CPC #    | General Availability |
|------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                    | NT-625FQA6    | JACK<br>6-conductor jack for mounting into a "Jiffy" pole or to a standard outlet box, using a NT-43QA bracket. Intended for connecting desk-type telephone set equipped with a 6-conductor teladapt line cord. | A0256314 | Stock                |

## JACK: WALL (STAINLESS STEEL)

### Ordering Information:

|  | Ordering Code | Description                                                                                                                            | CPC #    | General Availability |
|-------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|
|                                                                                     | NT-630AQA4    | JACK<br>4-conductor(Norloy 7) wall mounted jack, for mounting and connecting wall telephone sets equipped with an appropriate adaptor. | A0248241 | Stock                |
|                                                                                     | NT-630AQA6    | JACK<br>Same as above except 6-Conductor                                                                                               | A0248242 | Stock                |

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|



# MODULAR LINE CORDS

## 2 CONDUCTOR

### Ordering Information:

|                                                                                                   | Ordering Code | Description                                                    | Length | CPC #    | Pack |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------|--------|----------|------|
|                                                                                                                                                                                   | NT-D2QB-87    | Silver Satin, flat, two conductor cord e/w plugs at both ends. | .216m  | A0297188 | Std. |
|                                                                                                                                                                                   |               |                                                                | 1.0m   | A0373112 | Std  |
|                                                                                                                                                                                   |               |                                                                | 2.0m   | A0293344 | Std. |
|                                                                                                                                                                                   |               |                                                                | 4.3m   | A0299899 | Std. |
| AVAILABLE FROM<br>NORTHERN TELECOM CANADA LIMITED<br>TELECOM DISTRIBUTION DIVISION<br>105 LAURENTIAN BLVD.,ST.LAURENT,<br>QUEBEC H4N 2M3<br>Tel.(514) 747-5551 Fax.(514) 744-8771 |               |                                                                |        |          |      |

## 4 CONDUCTOR

### Ordering Information:

|                                                                                                    | Ordering Code | Description                                                             | Length | CPC #    | Pack |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------|--------|----------|------|
|                                                                                                                                                                                     | NT-D4BUQA-87  | Silver Satin, flat,<br>four conductor cord<br>e/w plugs at both<br>ends | .216m  | A0322719 | Std  |
|                                                                                                                                                                                     |               |                                                                         | .724m  | A0371157 | Std  |
|                                                                                                                                                                                     |               |                                                                         | 4.2m   | A0271168 | Std  |
|                                                                                                                                                                                     |               |                                                                         | 7.6m   | A0271169 | Std  |
| AVAILABLE FROM<br>NORTHERN TELECOM CANADA LIMITED<br>TELECOM DISTRIBUTION DIVISION<br>105 LAURENTIAN BLVD., ST. LAURENT,<br>QUEBEC H4N 2M3<br>Tel.(514) 747-5551 Fax.(514) 744-8771 |               |                                                                         |        |          |      |





# MISCELLANEOUS LINE CORDS

## 4 CONDUCTOR

### Ordering Information:

|  <p>AVAILABLE FROM<br/>NORTHERN TELECOM CANADA LIMITED<br/>TELECOM DISTRIBUTION DIVISION<br/>105 LAURENTIAN BLVD., ST. LAURENT,<br/>QUEBEC H4N 2M3<br/>Tel.(514) 747-5551 Fax.(514) 744-8771</p> | Ordering Code | Description                                                                                                                                     | Length       | CPC #                | Pack         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|--------------|
|                                                                                                                                                                                                                                                                                   | NT-D4QH-87    | Silver Satin, flat, four conductor cord e/w plugs at one end<br>Intended to convert 2500 Desk Type Telephones for use with Teladapt type jacks. | 2.1m<br>4.3m | A0261528<br>A0261529 | Std.<br>Std. |

## 6 CONDUCTOR

### Ordering Information:

|  <p>AVAILABLE FROM<br/>NORTHERN TELECOM CANADA LIMITED<br/>TELECOM DISTRIBUTION DIVISION<br/>105 LAURENTIAN BLVD., ST. LAURENT,<br/>QUEBEC H4N 2M3<br/>Tel.(514) 747-5551 Fax.(514) 744-8771</p> | Ordering Code | Description                                                                                                                                    | Length       | CPC #                | Pack         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|--------------|
|                                                                                                                                                                                                                                                                                    | NT-D6QF-87    | Silver Satin, flat, six conductor cord e/w plug at one end.<br>Intended to convert 2500 Desk Type Telephones for use with Teladapt type jacks. | 2.1m<br>4.3m | A0264368<br>A0264369 | Std.<br>Std. |

## EXTENSION

### Ordering Information:

|  <p>AVAILABLE FROM<br/>NORTHERN TELECOM CANADA LIMITED<br/>TELECOM DISTRIBUTION DIVISION<br/>105 LAURENTIAN BLVD., ST. LAURENT,<br/>QUEBEC H4N 2M3<br/>Tel.(514) 747-5551 Fax.(514) 744-8771</p> | Ordering Code | Description                                                                                                                 | Length       | CPC #                | Pack       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|------------|
|                                                                                                                                                                                                                                                                                     | NT-M4QC-87    | Silver Satin, flat four conductor cord e/w Teladapt Jack an Teladapt Plug, for use as an extension cord with modular cords. | 2.1m<br>4.3m | A0274388<br>A0274389 | Std<br>Std |





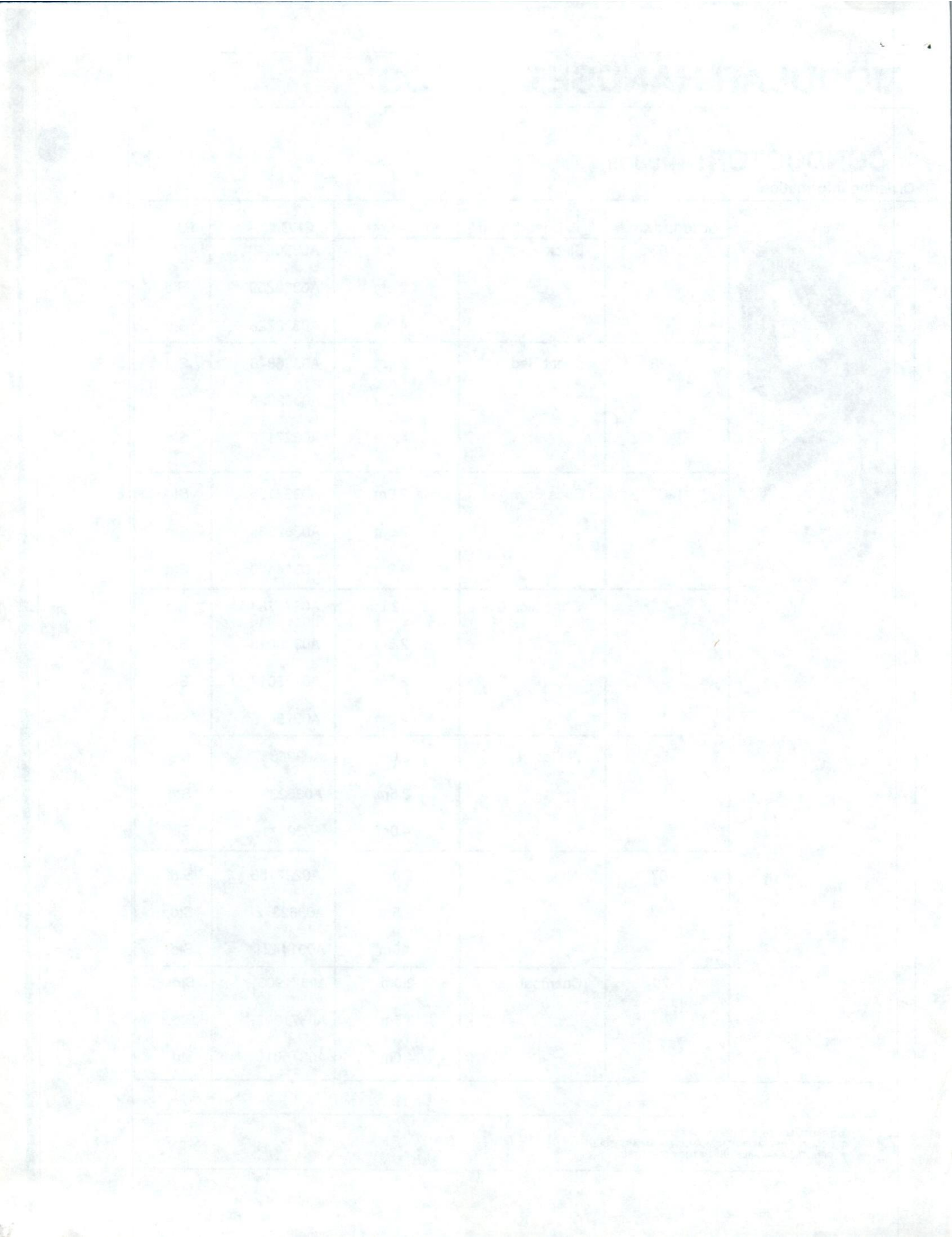
# MODULAR HANDSET CORDS

## CONDUCTOR: H4DUQB

### Ordering Information:



| Ordering Code | Description   | Length | CPC #    | Pack |
|---------------|---------------|--------|----------|------|
| -03           | Black         | 2.0m   | A0320640 | Std. |
|               |               | 2.5m   | A0366259 | Std. |
|               |               | 4.0m   | A0322728 | Std. |
| -23           | Bright Red    | 2.0m   | A0326846 | Std. |
|               |               | 2.5m   | A0362366 | Std. |
|               |               | 4.0m   | A0327118 | Std. |
| -26           | Coca Brown    | 2.0m   | A0297155 | Std. |
|               |               | 2.5m   | A0362368 | Std. |
|               |               | 4.0m   | A0314420 | Std. |
| -35           | Chamelon Grey | 120mm  | A0372784 | Std. |
|               |               | 2.0m   | A0375013 | Std. |
|               |               | 2.5m   | A0375014 | Std. |
|               |               | 4.0m   | A0375015 | Std. |
| -58           | White         | 2.0m   | A0326847 | Std. |
|               |               | 2.5m   | A0362370 | Std. |
|               |               | 4.0m   | A0327119 | Std. |
| -67           | Almond        | 2.0m   | A0297156 | Std. |
|               |               | 2.5m   | A0362372 | Std. |
|               |               | 4.0m   | A0314421 | Std. |
| -70           | Charcoal      | 2.0m   | A0371903 | Std. |
|               |               | 2.5m   | A0371907 | Std. |
|               |               | 4.0m   | A0375016 | Std. |





# MODULAR HANDSET CORDS

## 4 CONDUCTOR: H4DUQB (Cont'd)

### Ordering Information:

|  | Ordering Code | Description | Length | CPC #    | Pack |
|-----------------------------------------------------------------------------------|---------------|-------------|--------|----------|------|
|                                                                                   | -71           | Champagne   | 2.0m   | A0372788 | Std. |
|                                                                                   | -72           | Alpha Blue  | 2.0m   | A0372790 | Std. |
|                                                                                   | -75           | Sand        | 2.0m   | A0371906 | Std. |
|                                                                                   |               |             | 2.5m   | A0366260 | Std. |
|                                                                                   |               |             | 4.0m   | A0375017 | Std. |
|                                                                                   | -93           | Light Grey  | 2.0m   | A0297709 | Std. |
|                                                                                   |               |             | 2.5m   | A0362374 | Std. |
|                                                                                   |               |             | 4.0m   | A0314423 | Std. |
|                                                                                   | -94           | Dark Blue   | 2.0m   | A0297710 | Std. |
|                                                                                   |               |             | 2.5m   | A0362376 | Std. |
|                                                                                   |               |             | 4.0m   | A0314424 | Std. |
|                                                                                   | -96           | Taupe       | 2.0m   | A0320641 | Std. |
|                                                                                   |               |             | 2.5m   | A0371910 | Std. |
|                                                                                   |               |             | 4.0m   | A0322729 | Std. |
|                                                                                   | -97           | Soft Red    | 2.0m   | A0327120 | Std. |
|                                                                                   |               |             | 2.5m   | A0371911 | Std. |
|                                                                                   |               |             | 4.0m   | A0327122 | Std. |





# HANDSET: AMPLIFIED RECEIVE

FOR USE WITH HARMONY, SIGNATURE, RAPPORT, RAPPORT PLUS.



## ORDERING CODE

NTOCO9AF-67

## COLOUR

Almond

## CPC #

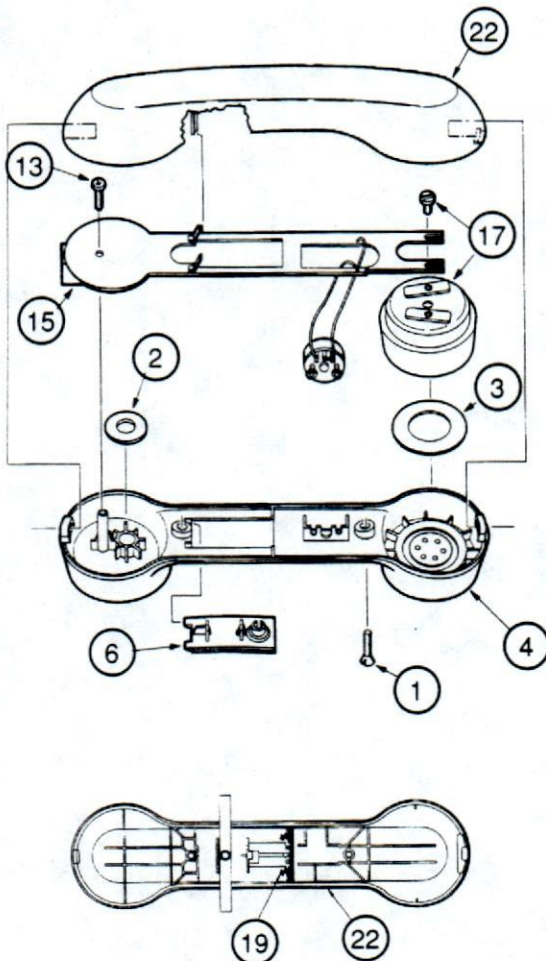
A0335388

## General Availability

Stock

AVAILABLE FROM  
NORTHERN TELECOM CANADA LIMITED  
TELECOM DISTRIBUTION DIVISION  
105 LAURENTIAN BLVD., ST. LAURENT,  
QUEBEC H4N 2M3  
Tel.(514) 747-5551 Fax.(514) 744-8771

## Exploded View:



## Feature Highlights:

- Hearing aid compatible
- Fully modular handset
- Battery operated - 2 AAA batteries
- Variable receive gain - 0 db. to 20 db.
- Thumb wheel receive gain control
- Low distortion gain
- Low battery indicator
- CSA approved

## List of Parts:

|    |                         |          |
|----|-------------------------|----------|
| 1  | Screw                   | P0601016 |
| 2  | Gasket                  | P0632875 |
| 3  | Gasket                  | P0632874 |
| 4  | Instrument Section Assy | P0759167 |
| 6  | Battery Door Assy       | P0790367 |
| 13 | Screw                   | P0601014 |
| 15 | P.C.B. Assy. NTOC0902   | A0335412 |
| 17 | Unit Rec. NTOC06AA      | A0298097 |
| 19 | Contact Spring          | P0695247 |
| 22 | Handset Cover Assy      | P0772667 |
| !  | Installation Guide      | P0694599 |
| !  | Battery Pack            | A0369265 |
| !  | Power Cell Safety Sheet | P0700529 |

! Not Shown (For Information Only)

-- Add the appropriate colour code

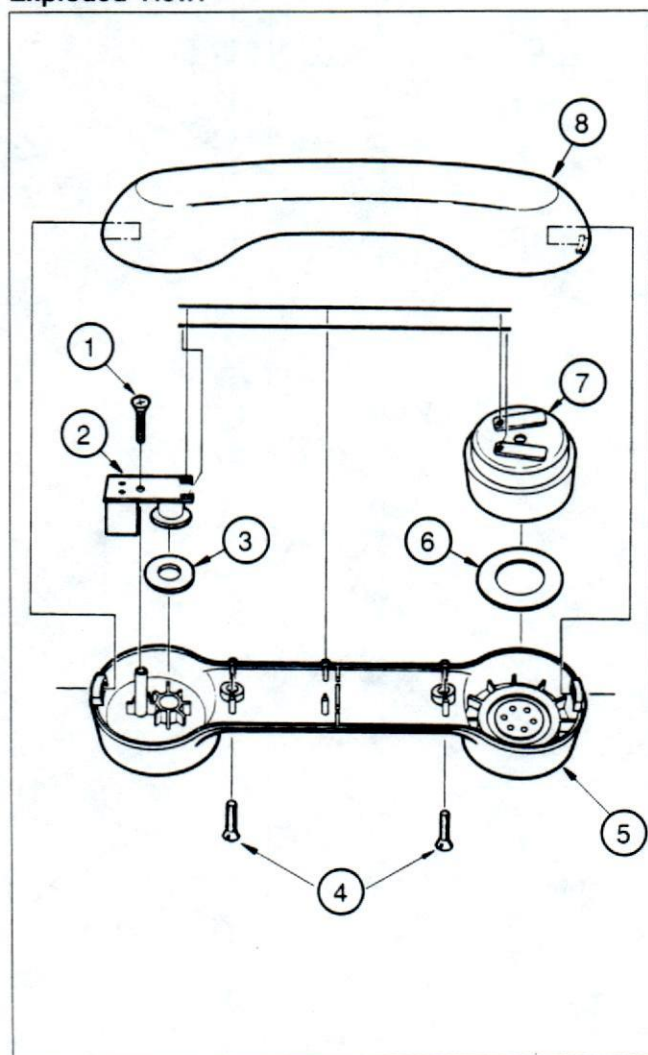




# HANDSET: FOR USE WITH HARMONY, SIGNATURE, RAPPORT, RAPPORT PLUS, PRIORITY, & PRIORITY LE.

|  | ORDERING CODE | COLOUR      | CPC #    | General Availability |
|-----------------------------------------------------------------------------------|---------------|-------------|----------|----------------------|
|                                                                                   | NTOCO9AA-03   | Black       | A0320638 | Stock                |
|                                                                                   | NTOCO9AA-23   | Bright Red  | A0326840 | Stock                |
|                                                                                   | NTOCO9AA-26   | Cocoa Brown | A0297168 | Stock                |
|                                                                                   | NTOCO9AA-58   | White       | A0326841 | Stock                |
|                                                                                   | NTOCO9AA-67   | Almond      | A0297169 | Stock                |
|                                                                                   | NTOCO9AA-93   | Light Grey  | A0298054 | Stock                |
|                                                                                   | NTOCO9AA-94   | Dark Blue   | A0298055 | Stock                |
|                                                                                   | NTOCO9AA-96   | Taupe       | A0320639 | Stock                |

## Exploded View:



## List of Parts:

|   |                       |          |
|---|-----------------------|----------|
| 1 | Screw                 | P0601014 |
| 2 | Unit. Trans. NTOC10AB | A0297458 |
| 3 | Gasket                | P0632875 |
| 4 | Screw                 | P0601016 |
| 5 | Instrument Section    | P06308-- |
| 6 | Gasket                | P0632874 |
| 7 | Unit. Rec. NTOC06AA   | A0302419 |
| 8 | Handset Cover         | P06277-- |
| ! | Handset Cord          | H4DUQB-- |

! Not Shown (For Information Only)

-- Add the appropriate colour code

# PLATE 1

| TABLE 1 |    | TABLE 2 |     |
|---------|----|---------|-----|
| 1       | 2  | 3       | 4   |
| 5       | 6  | 7       | 8   |
| 9       | 10 | 11      | 12  |
| 13      | 14 | 15      | 16  |
| 17      | 18 | 19      | 20  |
| 21      | 22 | 23      | 24  |
| 25      | 26 | 27      | 28  |
| 29      | 30 | 31      | 32  |
| 33      | 34 | 35      | 36  |
| 37      | 38 | 39      | 40  |
| 41      | 42 | 43      | 44  |
| 45      | 46 | 47      | 48  |
| 49      | 50 | 51      | 52  |
| 53      | 54 | 55      | 56  |
| 57      | 58 | 59      | 60  |
| 61      | 62 | 63      | 64  |
| 65      | 66 | 67      | 68  |
| 69      | 70 | 71      | 72  |
| 73      | 74 | 75      | 76  |
| 77      | 78 | 79      | 80  |
| 81      | 82 | 83      | 84  |
| 85      | 86 | 87      | 88  |
| 89      | 90 | 91      | 92  |
| 93      | 94 | 95      | 96  |
| 97      | 98 | 99      | 100 |

TABLE 3

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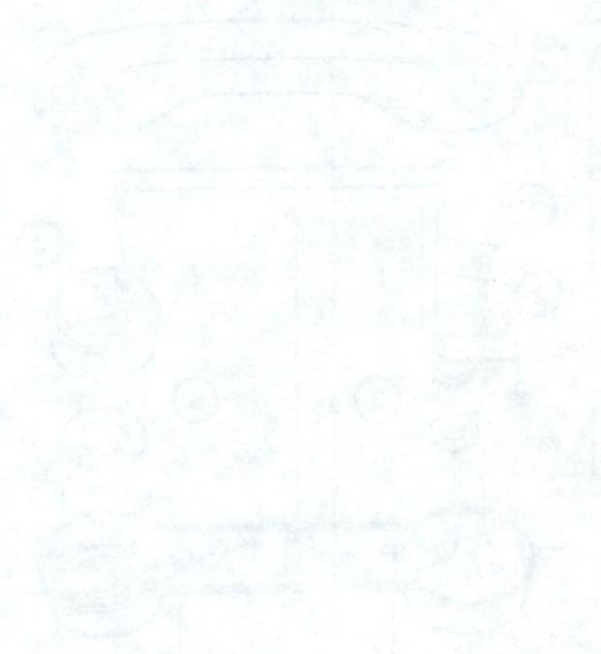


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TABLE 200



If you have any questions or comments, please contact:

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Fax (954) 851-8300



*A World of Networks*

## **Product Bulletin**

Number: CALA-071-PB

Date: April 1997

### **Market Retirement Notice for the Compact 6x16**

In accordance with the Customer Premises Equipment Distributor Agreement, this letter constitutes notification of the Market Retirement of the Norstar Compact. These products shall be market retired effective **June 30, 1997**. After this date orders will be filled only until stocks existing at that time are depleted to zero.

Please refer to the Distribution Agreement for specific terms and conditions of this support policy.

The specific product codes retired by this Notice are as follows:

A0399460 Compact KSU (6X16), 110v Disconnect Supervision  
A0401708 Compact KSU (6x16), 220v Disconnect Supervision  
A0401705 Compact KSU (6x16, 48v Disconnect Supervision  
A0393216 Compact DR5 SW (Replaced with DR5.1)  
A0402097 Compact DR5 SW (Replaced with DR5.1)  
A0402099 Compact DR5 SW (Replaced with DR5.1)

Current DR5.1 Levels of Software are still available for the Compact 6X16 and Modular 8X24 for installed base activities.

This retirement action is being taken in response to market demands for the greatly enhanced features and functionality provided to customers through the Norstar-PLUS Compact. These products provide scalability from a 4X16 configuration (or a 4X8 configuration for price sensitive customers) to growth up to 272 ports on the Modular ICS (0X32) with an unprecedented level of investment protection and flexibility. In addition, the Norstar-PLUS Compact ICS and Modular ICS provide today's customers with a platform to take them into the future. For example, both these platforms are ISDN ready today and will deliver ISDN BRI functionality during 1997. The 3X8 DR5 KSU will remain in the Norstar Product Portfolio for customers with no growth requirements but who still want the ease of use and functionality that Norstar provides.



The next release of StarTalk FLASH, available in the April 1997 time frame for MICS-XC and MICS 1.1 compatibility, will be 1.40. Until this compatibility release, there are no other planned software cartridge releases for StarTalk FLASH. In future, when referring to StarTalk FLASH, we will refer to the product release number; software versions will be used primarily for technical support purposes.

If you have any questions or comments, please contact:

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*A World of Networks*

## **Product Bulletin**

Number: CALA-073-PB

Date: April 1997

### **StarTalk Flash Software Releases**

Consistent with our regular process of upreleasing a product for new functionality, this new compatibility caused StarTalk FLASH to be upreleased to StarTalk FLASH 1.30. It should be noted, however, that **the software version is not necessarily the same as the product release**. The table below indicates the StarTalk FLASH product releases and corresponding software versions:

| PRODUCT<br>RELEASE  | StarTalk<br>FLASH 1.00 | StarTalk<br>FLASH 1.10 | StarTalk<br>FLASH 1.20 | StarTalk<br>FLASH 1.30       |
|---------------------|------------------------|------------------------|------------------------|------------------------------|
| DESCRIPTION         | product launch         | "patch"                | Maintenance<br>Release | Compact ICS<br>compatibility |
| SOFTWARE<br>VERSION | 1.00                   | 1.10                   | 1.28, 1.36             | 1.44                         |

It is important to understand that software version 1.36 does not contain compatibility for the Compact ICS, but all StarTalk FLASH systems shipped after August 2 are compatible. We apologize for any confusion this numbering may have created.

**To verify that a particular StarTalk FLASH is compatible with Compact ICS, confirm one of the following:**

- i) the PCMCIA cartridge label indicates either "ENG/FR S/W VER. 1.44" or "ENG/SP S/W VER. 1.44" (these numbers refer to software version, not product releases);
- ii) the feature cartridge or the carton label shows one of the new CPC's as identified in MC065, June 1996; or you may
- iii) perform a Feature 983 to confirm that the software version is 1.44.



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*A World of Networks*

## **Product Bulletin**

Number: CALA-071-PB

Date: April 1997

### **Market Retirement Notice for the Compact 6x16**

In accordance with the Customer Premises Equipment Distributor Agreement, this letter constitutes notification of the Market Retirement of the Norstar Compact. These products shall be market retired effective **June 30, 1997**. After this date orders will be filled only until stocks existing at that time are depleted to zero.

Please refer to the Distribution Agreement for specific terms and conditions of this support policy.

The specific product codes retired by this Notice are as follows:

A0399460 Compact KSU (6X16), 110v Disconnect Supervision  
A0401708 Compact KSU (6x16), 220v Disconnect Supervision  
A0401705 Compact KSU (6x16, 48v Disconnect Supervision  
A0393216 Compact DR5 SW (Replaced with DR5.1)  
A0402097 Compact DR5 SW (Replaced with DR5.1)  
A0402099 Compact DR5 SW (Replaced with DR5.1)

Current DR5.1 Levels of Software are still available for the Compact 6X16 and Modular 8X24 for installed base activities.

This retirement action is being taken in response to market demands for the greatly enhanced features and functionality provided to customers through the Norstar-PLUS Compact. These products provide scalability from a 4X16 configuration (or a 4X8 configuration for price sensitive customers) to growth up to 272 ports on the Modular ICS (0X32) with an unprecedented level of investment protection and flexibility. In addition, the Norstar-PLUS Compact ICS and Modular ICS provide today's customers with a platform to take them into the future. For example, both these platforms are ISDN ready today and will deliver ISDN BRI functionality during 1997. The 3X8 DR5 KSU will remain in the Norstar Product Portfolio for customers with no growth requirements but who still want the ease of use and functionality that Norstar provides.





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## AMIS Networking Feature Comparison

| <u>Feature</u>                    | <u>Norstar-<br/>PLUS<br/>Voice Mail</u> | <u>Standard<br/>AMIS</u> | <u>Meridian<br/>Mail<br/>AMIS</u> |
|-----------------------------------|-----------------------------------------|--------------------------|-----------------------------------|
| Message Length (min.)             | 8                                       | 8                        | 99                                |
| Max Messages / Send               | 9                                       | 9                        | Unlim.                            |
| Send/Receive/Reply                | Y                                       | Y                        | Y                                 |
| Forward                           | Y                                       | N                        | Y                                 |
| Non-delivery Notification         | Y                                       | Y                        | Y                                 |
| Timed Delivery                    | Y (1)                                   | N/A                      | Y                                 |
| Acknowledge Receipt               | Y                                       | N                        | N                                 |
| Urgent / Privacy tags             | N                                       | N                        | N                                 |
| Message Send Priority             | Y                                       | N                        | Y                                 |
| AMIS Open Addressing              | Y                                       | Y                        | Y                                 |
| Distribution Lists                | Y                                       | N/A                      | Y                                 |
| Send/Reply Message Features:      |                                         |                          |                                   |
| Spoken Name Confirmation          |                                         |                          |                                   |
| Call Sender                       |                                         |                          |                                   |
| Reply-All                         | Y (2)                                   | N                        | Y                                 |
|                                   | N                                       | N/A                      | Y                                 |
|                                   | N                                       | N                        | N                                 |
| Call-Answer Message Features (2): |                                         |                          |                                   |
| Spoken Name Confirmation          |                                         |                          |                                   |
| Call-back Caller                  |                                         |                          |                                   |
| Reply to Caller                   | N                                       | N                        | Y                                 |
|                                   | N                                       | N/A                      | Y                                 |
|                                   | N                                       | N                        | Y                                 |

Note:

(1) Norstar-PLUS Voice Mail Release 2.0  
supports call blocking periods

(2) Target must be a network delivery mailbox

Direct addressing is available only to mailbox owners, not to general callers. Direct addressing is not permitted when using Feature 980 (leave message) even when the caller is using an extension that belongs to a mailbox owner.

**2. Network delivery mailboxes:** allows callers at one site to quickly and easily send a message to a mailbox at a remote location. Each network delivery mailbox is assigned a mailbox number on the system identifying the destination site telephone number, line or line pool number and destination mailbox number.

When the network delivery mailbox is selected, Norstar-PLUS Voice Mail automatically accesses the specified line, dials the destination site telephone number and transmits the network message to the target mailbox. The user needs only to record a message and select the network delivery mailbox number. For example, you might set up a network delivery mailbox number 5674. You would add the mailbox to the Norstar-PLUS Voice Mail system and specify line number 8, destination telephone number 555-1213 and the destination mailbox 234. Each time a registered Norstar-PLUS Voice Mail mailbox owner accesses mailbox 5674 at your site, Norstar-PLUS Voice Mail knows immediately it is a message intended for mailbox 234 at another location.

The number of network delivery mailboxes needed is determined by how many users are in the AMIS network and what type of network messaging is required. Network delivery mailboxes compete for available mailbox numbers and it is recommended that administrators reserve certain number ranges for various purposes, perhaps by leading digit, so that the type of mailbox can be inferred from its number. There is a maximum of 1000 mailboxes on Norstar-PLUS Voice Mail Release 2.0. The maximum number of mailboxes includes any combination of special, personal, guest, information and network delivery mailboxes.

## **AMIS Usage**

AMIS is assigned through class of service and is used by registered mailbox owners who have initialized their mailboxes. Users can only send a network message after they have opened their mailboxes. After recording a message, a user can either send the message through direct addressing or use a network delivery mailbox.

Network delivery mailboxes can also appear in the company directory. Although they appear in the company directory, only a registered mailbox owner can select a network delivery mailbox.

**Note:** When the Automated Attendant provides the company directory option and a network delivery mailbox is selected from the directory by a caller without a mailbox, the caller is informed that access to the mailbox is not allowed. Only registered mailbox owners can access network delivery mailboxes.

## **AMIS Administration**

AMIS is installed by use of a software keycode. After installation, AMIS is fully operational and available to all registered mailbox users. AMIS is controlled by a number of parameters which are maintained from "Network Admin" under Feature 983. After enabling AMIS, the administrator may need to increase the number of outdial channels. As a general rule, the number of outdial channels should never exceed 50% of the total available channels.



**Note:** When AMIS is first installed, all of the above features are enabled with the exception of broadcast and system group list messaging. These two features are defaulted to "no" and must be enabled to be used. Also, in order for the AMIS software to function, the Norstar-PLUS Voice Mail system must have the Automated Attendant set to answer the lines on which the other AMIS systems will call.

Each AMIS site on the network has a special "loopback" mailbox number which is used to determine if two sites are communicating successfully. Whenever a message is received by a loopback mailbox, it immediately sends the message back again to the originating mailbox on the originating system. If a voice message is sent to the loopback mailbox of a site and fails to receive a response after a while, one site or the other may be improperly configured.

The loopback mailbox is created automatically when AMIS is installed. **If a mailbox with the required number already exists in the system, it will be deleted by the install process.** The mailbox number will be "13, 103, 1003,..." depending on the mailbox number length in use at that site.

(See the attached Appendix A for an AMIS feature comparison with the AMIS Standard, Meridian Mail and Norstar-PLUS Voice Mail.)

### **Sending Network Messages**

When a local user addresses a message to a remote AMIS user, the local system essentially dials the remote system access number, identifies itself as another AMIS-compatible site, identifies the target mailbox number, and delivers the message. Non-voice information is exchanged via DTMF signaling. Voice information is transferred by having one site play while the other records the message.

An AMIS network delivery call will typically deliver a single message to a single recipient, however, the Norstar-PLUS Voice Mail implementation of AMIS supports "batching" of up to 8 messages destined for a single site. While transparent to subscribers, this feature will result in lower long distance charges for the sending system. Users should avoid forwarding a message multiple times involving AMIS transfers because of the slight degradation in voice quality.

The times for sending network messages is controlled by calling block periods where the administrator can specify up to 4 blocked periods per day, for each day of the week. Typically, an administrator may want to block the busiest times of the work day and send the messages when lines are less busy and perhaps long distance rates are cheaper.

Network messages can be sent to any site on an AMIS network with the network receive feature enabled. Network messages can be sent in 2 ways:

**1. Direct addressing:** Allows a user to specify where a message is to be delivered. When a mailbox owner uses direct addressing, the user specifies the telephone number of the destination site and the destination mailbox number. The mailbox number coded in the address must correspond to a regular subscriber mailbox at the remote site system. The line or line pool number Norstar-PLUS Voice Mail uses to make the call is taken from the loop back mailbox outdial set up.

After completing the address, the user is given the option of assigning delivery options, such as urgent or certified, or viewing the address components for correctness prior to sending the message.





*A World of Networks*

## **Product Bulletin**

Number: CALA-070-PB

Date: April 1997

# **Norstar-PLUS Voice Mail 2.1**

## **AMIS Networking**

### **Introduction**

The Audio Messaging Interchange Specification (AMIS) is the telecommunication industry solution to networking remote voice mail systems which are manufactured by various vendors who developed and market the AMIS application. Those voice mail vendors who currently comply with the AMIS specification are Northern Telecom (Nortel) for Meridian Mail and Norstar-PLUS Voice Mail, Lucent Technologies Audix, Centigram, Octel, ROLM PhoneMail, VMX, Active Voice, AVT, and Toshiba. AMIS is available on Norstar-PLUS Voice Mail (Release 2.0 and 2.1).

### **AMIS Description**

AMIS provides voice messaging to different mailboxes located at different sites on a communication network. A network, as it is referred to here, is a collection of offices, locations or sites connected by a telecommunication link. Each site on the network must have AMIS installed and enabled to send, receive or reply to network messages.

Each site on an AMIS network is assigned a network identification number. This number consists of a site country location, area code, and telephone number.

There are AMIS features allow network messaging capability. These features include:

1. Network receive: allows a site to receive network voice messages from other AMIS sites.
2. Network delivery: allows a site to send voice messages to other AMIS sites.
3. Network reply: allows a site to respond to network messages.
4. Network broadcast messaging: when enabled, allows broadcast messaging across the AMIS network.
5. Network system group list messaging: when enabled, allows network delivery messages to be sent to other AMIS sites on a group list.





### **Future Norstar Products**

A test of the Year 2000 transition has been added to the Norstar Product Verification test suite to ensure compliance for new products being developed.

### **Third Party PC based Applications**

Nortel is not responsible for Year 2000 compliance of third party PC based applications which interface with the Norstar system. Although many applications might utilize the Norstar system clock or even gather accurately-dated information from the Norstar TCM loop, the responsibility for Year 2000 compliancy of these products remains that of the vendor or manufacturer.

### **Vantage - Manufacture Discontinued**

Vantage systems are not Year 2000 compliant. This product portfolio was Manufacture Discontinued in 1990 and as such there will not be any product development to make it compliant.

Thank you for your interest in the current and future functionality of the Norstar product line. Nortel is committed to building strong partnerships with our customers by understanding and responding to their needs. Nortel has a proven record of developing telecommunication products with the highest quality to offer you a cost effective and efficient business solution.

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## **StarTalk FLASH**

The StarTalk FLASH will encounter minor incompatibilities with the Year 2000 transition.

All StarTalk FLASH releases that are prior to the StarTalk FLASH 1.5 software release will sometime show the Year 2000 as "100" instead of "00", for example, February 3, 2000 would read 02/03/100 instead of 02/03/00 as it should. The voice mail operation is unaffected, but the report will continue date errors as stated.

The situation will be addressed in the release of StarTalk FLASH 1.5, which makes it compatible with the CICS 2.0 and MICS 2.0 release.

## **StarTalk**

The will encounter minor incompatibilities with the Year 2000 transition.

All StarTalk products exhibit the following state when the date changes to January 1, 2000. The internal clock gets stuck at the year 1999, although the day and date will rollover to January 1 properly. The voice mail operation is unaffected, but the reports will contain date errors.

This situation was addressed in the StarTalk upissue release 2.04L which makes it compatible with the DR 1.1 software release (Jan/97). It is provided as a free upgrade to customers upgrading their Modular ICS systems to DR 1.1.

Optionally on January 1, 2000, they can simply reboot their system and the date will revert to the default of January 1, 1991. This will correct any reporting issues, since those issues are all associated with the year portion of the date. The year will be reported as 1991, but in all other aspects the system will function normally.

## **StarTalk Mini**

The StarTalk Mini will encounter minor incompatibilities with the Year 2000 transition.

All StarTalk Mini products exhibit the following state when the date changes to January 1, 2000. The internal clock gets stuck at the year 1999, although the day and date will rollover to January 1 properly. The voice mail operation is unaffected, but the reports will contain date errors.

There will be no upissue provided for StarTalk Mini customers. On January 1, 2000 they can simply reboot their system and the date will revert to the default of January 1, 1991. This will address any reporting issues, since those issues are all associated with the year portion of the date. The year will be reported as 1991, but in all other aspects the system will function normally.

## **Remainder of Norstar Product Line**

The remainder of the Norstar product line, past and present, will transition into the Year 2000 with no issues. This has been thoroughly tested and verified in Nortel Technologies laboratories.



*A World of Networks*

## **Product Bulletin**

Number: CALA-072-PB

Date: April 1997

### **Norstar Year 2000 Transition Compliance**

The Year 2000 is an important subject to anyone involved with telecommunications and computer systems. The change from 1999 to 2000 can create potential incompatibilities due to processor calendar calculations. In addition, the Year 2000 is a leap year, a century event that only occurs every 400 years, which adds further complexity to the transition.

Nortel, as the industry leader in digital communications systems, wants to ensure that you are fully conversant in this important topic so that you are able to make logical, informed decisions. We recognize that it is important for you to be able to understand the Year 2000 compatibility of the Norstar portfolio so that you can plan and prepare your transition over the next three years.

Included in this communiqué is a concise explanation which provides you with the Year 2000 compatibility for each Norstar system and Norstar application. It also includes a statement on the Vantage product line, which was Manufacture Discontinued in 1990. For products which require evolution for the Year 2000 we have provided a recommended plan.

In keeping with Nortel's commitment to investment protection, we will continue to work with our Authorized Distributors to offer you cost effective and efficient business solutions.

#### **Norstar/Norstar-PLUS Systems**

All Norstar/Norstar-PLUS systems will transition into the Year 2000 with no issue. This has been thoroughly tested and verified in Nortel Technologies laboratories.

#### **Norstar Voice Mail**

The Norstar Voice Mail 1.0 will encounter minor incompatibilities with the Year 2000 transition. The Norstar Voice Mail 1.0 report will sometimes show the Year 2000 as "100" instead of "00", for example, February 3, 2000 would read 02/03/100 instead of 02/03/00 as it should. The voice mail operation is unaffected, but the report will continue date errors as stated.

This situation was addressed in Norstar Voice Mail 2.0, which was available in July 1996, and which was provided as a free upgrade to Norstar Voice Mail 1.0 customers.



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|                                                               |          |           |
|---------------------------------------------------------------|----------|-----------|
| Norstar Voice Mail Documentation Kit (French) (consisting of) | A0642912 | A0666011  |
| English Doc Kit                                               | A0642915 | A0666012  |
| Norstar Voice Mail Set Up and Operation Guide - French        | P0819900 | P0857699  |
| Reference Guide - French                                      | P0819901 | P0857700  |
| Norstar Voice Mail Programming Record - French                | P0819904 | P0857702  |
| Norstar Voice Mail Installation Guide - French                | P0819903 | P0857701  |
| Norstar Voice Mail User Guide Kit - French                    | A0642916 | A0667414  |
| Norstar Voice Mail User Guide Kit - French                    | A0642914 | A0667414  |
| Norstar Voice Mail User Guide - French (20 included)          | P0819905 | P0859496  |
| Convenience Card - French (5 sheets of 4)                     | P0819902 | No change |
| Norstar Voice Mail User Guide - English                       | P0819899 | P0859495  |
| Norstar Voice Mail User Guide - French                        | P0819905 | P0859496  |
| Norstar Voice Mail Maintenance Manual - English               | P0745015 | P0857707  |
| Norstar Voice Mail Maintenance Manual - French                | P0745016 | P0857708  |
| Norstar Voice Mail End User Documentation Kit (Spanish)       | A0646159 | A0667415  |
| Convenience Card - Spanish (10 sheets of 4)                   | P0830320 | No change |
| Norstar Voice Mail User Guide - Spanish (40 included)         | P0830319 | P0859497  |
| Norstar Voice Mail Documentation Kit for Training - English   | A0642911 | A0666013  |
| (consisting of)                                               |          |           |
| Norstar Voice Mail Set Up and Operation Guide - English       | P0819894 | P0857695  |
| Reference Guide - English                                     | P0819895 | P0857696  |
| Norstar Voice Mail Programming Record - English               | P0819898 | P0857698  |
| Convenience Card - English (1 sheet of 4)                     | P0819896 | No change |
| Norstar Voice Mail Installation Guide - English               | P0819897 | P0857697  |
| Norstar Voice Mail User Guide - English (1 included)          | P0819899 | P0859495  |
| Norstar Voice Mail Documentation Kit for Training - French    | A0642918 | A0666014  |
| (consisting of)                                               |          |           |
| Norstar Voice Mail Set Up and Operation Guide - French        | P0819900 | P0857699  |
| Reference Guide - French                                      | P0819901 | P0857700  |
| Norstar Voice Mail Programming Record - French                | P0819904 | P0857702  |
| Convenience Card - French (1 sheet of 4)                      | P0819902 | No change |
| Norstar Voice Mail Installation Guide - French                | P0819903 | P0857701  |
| Norstar Voice Mail User Guide - French (1 included)           | P0819905 | P0859496  |
| Fax Messaging Documentation Kit (English) consisting of       | A0617029 | A0666016  |
| Fax Setup and Ops Guide - English                             | P0745028 | P0857703  |
| Fax Installation Guide - English                              | P0745030 | P0865366  |
| Fax User Guide - English (40 are included)                    | P0745034 | P0857704  |
| Fax Messaging Documentation Kit (French) consisting of        | A0617030 | A0666015  |
| Fax Setup and Ops Guide - French                              | P0745029 | P0857705  |
| Fax Installation Guide - French                               | P0745031 | P0865366  |
| Fax User Guide - French (40 are included)                     | P0745035 | P0857706  |
| Fax Messaging User Guide - Spanish                            | P0745036 | P0857709  |



In conjunction with the introduction of Release 2.1, Norstar is also introducing Norstar Application Module II (NAM II). The driving forces behind the changes in the Applications Module are twofold: upgrading to a Pentium processor, and increasing the size of the hard drive to support 70 hours of voice and fax message storage. With the increase in storage, the Applications Module II will be able to support multiple applications, such as Norstar-PLUS Voice Mail and Norstar-PLUS Interactive Voice Response (scheduled to be introduced in Q497) on one platform.

New product codes for Norstar-PLUS Voice Mail models, AMIS and Fax Messaging options are included in this communiqué. Some product codes were not changed as you will see in the table, but are included as well.

Norstar Voice Mail Release 2.1 is also supported on the existing NAM (NAM I) which may be running with Release 1.X or 2.0 software. The Release 2.1 upissue software for existing 1.X or 2.0 systems will be produced on a CD ROM disk with a set of diskettes and will be provided to the channels at no charge to be used in conjunction with the CD ROM readers (*or drives*) previously provided to the channels for the Release 2.0 upissues. This upissue kit is for **software only** and does not include any hardware changes.

| <u>Ordering Codes</u><br><u>Code</u>                                              | <u>Old Code</u> | <u>New</u> |
|-----------------------------------------------------------------------------------|-----------------|------------|
| Norstar Voice Mail English Model 2                                                | A0642921        | A0666308   |
| Norstar Voice Mail English Model 4                                                | A0642924        | A0666311   |
| Norstar Voice Mail English Model 6                                                | A0642927        | A0666316   |
| Norstar Voice Mail English Model 8                                                | A0642930        | A0666319   |
| Norstar Voice Mail French Model 2                                                 | A0642922        | A0777309   |
| Norstar Voice Mail French Model 4                                                 | A0642925        | A0666312   |
| Norstar Voice Mail French Model 6                                                 | A0642928        | A0666317   |
| Norstar Voice Mail French Model 8                                                 | A0642931        | A0666320   |
| Norstar Voice Mail 2.1 S/W Up-issue Package,<br>Bilingual CD-ROM                  | A0617430        | A0666322   |
| Fax Messaging - English                                                           | A0409575        | A0670872   |
| Fax Messaging - French                                                            | A0409576        | A0670873   |
| Norstar Voice Mail Documentation Kit (English) (consisting of)<br>English Doc Kit | A0642911        | A0666009   |
| Norstar Voice Mail Set Up and Operation Guide - English                           | A0642913        | A0666010   |
| Reference Guide - English                                                         | P0819894        | P0857695   |
| Norstar Voice Mail Programming Record - English                                   | P0819895        | P0857696   |
| Norstar Voice Mail Installation Guide - English                                   | P0819898        | P0857698   |
| Norstar Voice Mail User Guide Kit - English                                       | P0819897        | P0857697   |
| Norstar Voice Mail User Guide Kit - English                                       | A0642914        | A0667413   |
| Norstar Voice Mail User Guide - English (20 included)                             | A0642914        | A0667413   |
| Convenience Card - English (5 sheets of 4)                                        | P0819899        | P0859495   |
|                                                                                   | P0819896        | No change  |



*A World of Networks*

## **Product Bulletin**

Number: CALA-074-PB

Date: April 1997

### **Norstar-PLUS Voice Mail Release 2.1**

Nortel (Northern Telecom) Small Business Marketing is pleased to introduce Release 2.1 of Norstar-PLUS Voice Mail, effective **April 30, 1997**, which replaces Release 2.0. Release 2.1 is the next evolution of Norstar Voice Mail and encompasses all of the existing features and functionality of Release 2.0, options for AMIS networking and a feature-rich set of fax messaging applications, as well as the following new enhancements:

- **Editable Classes of Service:** This functionality is being introduced in response to customer requests and allows the administrator or technician to edit any of the values associated with a specific Class of Service. This is an especially useful capability for customizing certain elements, like message length (in minutes) where there might be a need for longer than 10 minutes. When a value in a given class of service is edited, that change effects every mailbox that has that class of service - it is not mailbox specific.

**Note:** Changes to classes of service must be performed using terminal administration and cannot be performed from a telephone set. Terminal administration can be accessed using any of the following methods:

- a) Installing the optional Monitor package (including SVGA card, keyboard and mouse) and running the OS/2 SPMSRV application.
- b) Using a VT100 compatible terminal connected to the Norstar Applications Module with an RS-232 connector.
- c) Using a personal computer with VT100 terminal emulation software connected to the Norstar Applications Module with an RS-232.

- **Multiple Extensions to one mailbox:** this functionality means that up to three (3) extensions can be directed to one mailbox. The most common instance of this would be when a user has two lines and is using both a conventional Norstar set at the desk and a wireless Companion set. Since calls to both numbers would be answered by the same mailbox, the user only has to check and maintain one mailbox for both his extension numbers. In this situation, Norstar call processing will be configured to present calls to each of a subscriber's sets simultaneously, regardless of the Dialed Number, with the first set to answer controlling the call.

Another way this capability is implemented on Norstar Voice Mail 2.1 is to prevent a fax call from being answered by the called party. The mailbox owner is assigned a second extension number which is a virtual number that is directed to the mailbox and does not ring at any telephone set. This means that fax calls are always received on the first try and mailbox owners do not have to transfer callers into the mailbox or experience a loud and annoying fax tone when they answer those fax calls inadvertently. A fax message sent to the alternate number will be stored in the one mailbox and message notification will be given on the display of the telephone set.



Nortel CALA Inc.  
1500 Concord Terrace  
Sunrise, Florida 33323  
Teléfono: (305) 851-8000  
Fax: (954) 851-8818  
Attn: Comunicaciones

**NORTEL**  
NORTHERN TELECOM

## “Boletines de Marketing” Cambio de Dirección y Comentarios

Nueva subscripción ☐ Cambio de dirección/título ☐

Por favor especifique el producto:

☐ Companion ☐ Magellan ☐ Meridian 1 ☐ Norstar

☐ Por favor marque  
aquí si Ud. es nuestro  
cliente para Magellan

☐ Telsets

Conmutación:

☐ Norte América

☐ Internacional

Transmisión:

☐ ANSI

☐ ETSI

Nombre: \_\_\_\_\_

Título: \_\_\_\_\_

Compañía: \_\_\_\_\_

Dirección: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Ciudad, País: \_\_\_\_\_

Tel/Fax: \_\_\_\_\_

Comentarios: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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Para asegurarse que  
reciba los Boletines de  
Nortel durante los  
siguientes meses,  
favor verifique su  
dirección y haga  
cualquier cambio  
necesario.

Si su información está  
correcta, puede  
utilizar este formulario  
para añadir el nombre  
de algún colega que  
quiera recibir futuros  
boletines.

**Por Favor, Tome  
Nota del Cambio de  
Número de Fax**

Envíe este formulario  
al fax (954)851-8818,  
atención, Jackie  
Roberts, en el Dept.  
de Comunicaciones.



Nortel CALA Inc.  
1500 Concord Terrace  
Sunrise, Florida 33323  
Telephone: (305) 851-8000  
Fax: (954) 851-8818  
Attn: Marketing Communication

**NORTEL**  
NORTHERN TELECOM

## **“Marketing Bulletins” for Change of Address & Comments**

This is a new subscription ☐ This is an address/title change ☐

Please specify product:

☐ Companion ☐ Magellan ☐ Meridian 1 ☐ Norstar

☐ Please mark box  
if you are a  
Magellan Customer

☐ Telsets

Switching:

☐ North America

☐ International

Transmission:

☐ ANSI

☐ ETSI

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

City, Country: \_\_\_\_\_

Tel/Fax: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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### **STAY CONNECTED**

To ensure that you continue to receive Nortel Bulletins in the coming months, please examine your mailing label and make any necessary corrections on this business reply form.

If your information is up-to-date, you may want to use the form to add a colleague to the subscriber list.

### **Please Note Fax Number Change**

Send this form via fax to the following number  
(954) 851-8818,  
attention:  
Jackie Roberts,  
Documentation  
Manager.





## **10.0 Contact List**

For more information please contact:

### **Northern Telecom**

#### **Norstar Marketing**

- Carlos Fidalgo (954) 851-8064

#### **Norstar Product Line Management**

- Cynthia Becerra (954) 851-8354

#### **Norstar New Product Introduction**

- Peter DeSousa (954) 852-7031

#### **CTAS Technical Support**

- (954) 851-8400



## 8.4 Repair Pricing

Two levels of service are available for all Norstar Digital Key System components.

1. Level 1 encompasses full electrical, mechanical, and cosmetic repair of the key system component.
2. Level 2 encompasses only system testing procedures and cosmetic appearance repair. This service, whether in- or out-of-warranty, is always chargeable.

## 8.5 D.O.A. Policy

Defective-on-Arrival products include out-of-box failures and installation failures. Product installed for more than 48 hours will be treated as a repair return and not a valid D.O.A.

## 9.8 D.O.A. Exclusions and Limitations

The following limitations apply to all valid D.O.A.'s:

- The product must not appear used or blemished
- The product must be returned in the original packaging with all original components intact including Designation Cards, Booklets, Line Cords, Cabling, etc.
- A brief description of the fault must be placed in the box.



## **8.0 Warranty and Repair**

The following is the Multimedia Communications Systems Division Warranty Policy and Procedure for Warranty application and the repair process for Norstar Key System components.

### **8.1 Warranty**

The following warranty is in lieu of all other warranties and conditions whether statutory, expressed or implied, including any warranty as to merchantability or fitness for purpose, and shall constitute the sole remedy and Northern Telecom's sole liability for breach of warranty.

Northern Telecom warrants Norstar System components against mechanical or electrical failure attributable to defects in Northern Telecom's workmanship or materials for a period of 18 months from date of manufacture.

Northern Telecom will, at no charge and at its option, repair or replace a defective Norstar Key System component with a new or rebuilt unit during the warranty period. Repaired or replaced units shall be warranted for 90 days or the balance of the original warranty period whichever is longer.

### **8.2 Warranty Exclusions and Limitations**

This warranty does not apply to damage or failures resulting from:

- negligence, abuse, misuse or accident
- repair by unauthorized persons
- failure to comply with warranty service procedures (outlined below)
  - improper installation
  - modifications to equipment or software or attachments of equipment or peripherals except as specifically authorized by Northern Telecom
  - units for which the warranty period (18 months) has expired.

Equipment returned to Northern Telecom under these circumstances will be handled as regular, chargeable repairs.

In addition, any expenses related to the removal and/or replacement of " custom brandlining" will be charged to the sending telephone company or distributor.

Northern Telecom shall be the sole arbiter in applying and interpreting the above exclusions and limitations.

### **8.3 Repair Advance Replacement**

Repair advance replacement equipment is available only for out-of-service equipment, and updates/upgrades. Lead-time for advance replacement equipment is 72 hours.



## 7.0 Promotion

The Norstar-PLUS Analog Station Module will be promoted through the provision of a 2 color product marketing brochure. This one page brochure will describe the features of the Analog Station Module and will be designed as a FAXable brochure.

## 6.0 Technical Support

CALA CTAS (Customer Technical Assistance Support) will provide Technical Support via CSR's or through the CTAS Help Desk. For further information, please contact your CTAS personnel, or please reach the help desk at: (954)851-8400.



### 5.3 Lucent Partner (Analog System)

AT&T's Partner is an analog system that supports full connectivity of analog devices to any station port.

Norstar Advantages: As the world's best selling Key System, Norstar digital architecture brings unparalleled simplicity, reliability, and voice quality to the small business market.

### 5.4 Panasonic KX-TD

Analog connectivity is an integrated part of the KX-TD system.

Extension Card (KX-TD170): Has 8 circuits to support digital sets (KX-T7200 series) or analog sets (KX-T7000 series or single line devices).

XDP (eXtra Device Port): Allows connection of any single line device to the XDP on the KX-T7200 series digital phone or to the T/R pair of any station port which is supporting a digital set. Feature doubles system capacity. Devices can have the same or different extension numbers.

Norstar Advantages: Norstar-PLUS Modular ICS with its modular trunk and station architecture provides greater expansion opportunities than the KX-TD system. Panasonic KX-TD's largest system configuration supports a maximum of 64 digital telephones and 64 analog telephones. Additionally, Norstar has superior functionality than the KX-TD. KX-TD supports only loop start analog trunking and no ACD package is available.

### 5.5 Panasonic DBS

The DBS supports analog connectivity in the following ways:

Analog Extension Card (VB-43621): Has 8 circuits to support analog devices.

DTMF Receiver Card (VB-43430, VB-43431): Available in 4 or 8 port configurations and required when DISA and single line telephones are used behind system.

Norstar Advantages: The Norstar Analog Station Module comes equipped with the necessary DTMF receivers reducing installation time. Norstar-PLUS Modular ICS with its modular trunk and station architecture provides better flexibility and expansion opportunities than the DBS system. Only 8 ports on the DBS system are universal. All other ports are designated line or station.



## 5.0 Competition

### 5.1 Toshiba DK Series

Toshiba's Strata DK 280 Series provides analog connectivity via the following optional printed circuit boards:

#### Standard Telephone Interface Unit (RSTU)

- Has 8 circuits to support single-line devices
- Supports rotary and push button standard telephones, fax, dictation equipment, modems, background music sources, off-premise stations and voice mail

NOTE: The RSTU ( standard telephone interface unit ) also requires the DTMF receiver card to offer tone detection /restrictions DTMF standard phones, DISA lines, voice mail or auto attendant are used behind the system.

#### DTMF receivers:

- RRCS-4 (4 circuit)
- RRCS-8 (8 circuit)
- RRCS-12 (12 circuit)

Norstar Advantages: The Norstar Analog Station Module comes equipped with the necessary DTMF receivers reducing installation time. In addition, field connection of Toshiba mother boards to optional daughter boards may result in damaged connectors resulting in field trouble shooting and broken boards.

### 5.2 Lucent Legend

The Legend supports analog connectivity in the following ways:

008 OPT: Has capacity for 8 tip/ring stations and supports off premise extensions and message waiting LED.

012 T/R: Has capacity for 12 tip/ring (T/R) stations and supports MERLIN Attendant, MERLIN Mail, message waiting LED, answering machine, FAX, modems and all other analog devices.

MFM (Multi-Functional Module): Plugs into the base of Legend MLX telephones and allows the connection of one T/R device with its own extension.

Norstar Advantages: Preliminary price estimates and competitive analysis indicate that, on a per port basis, Norstar's Analog Station Module will be 10% to 20% less expensive than Lucent's modules. Norstar's single port ATA solution is 30% to 40% less expensive than Lucent's MFM.



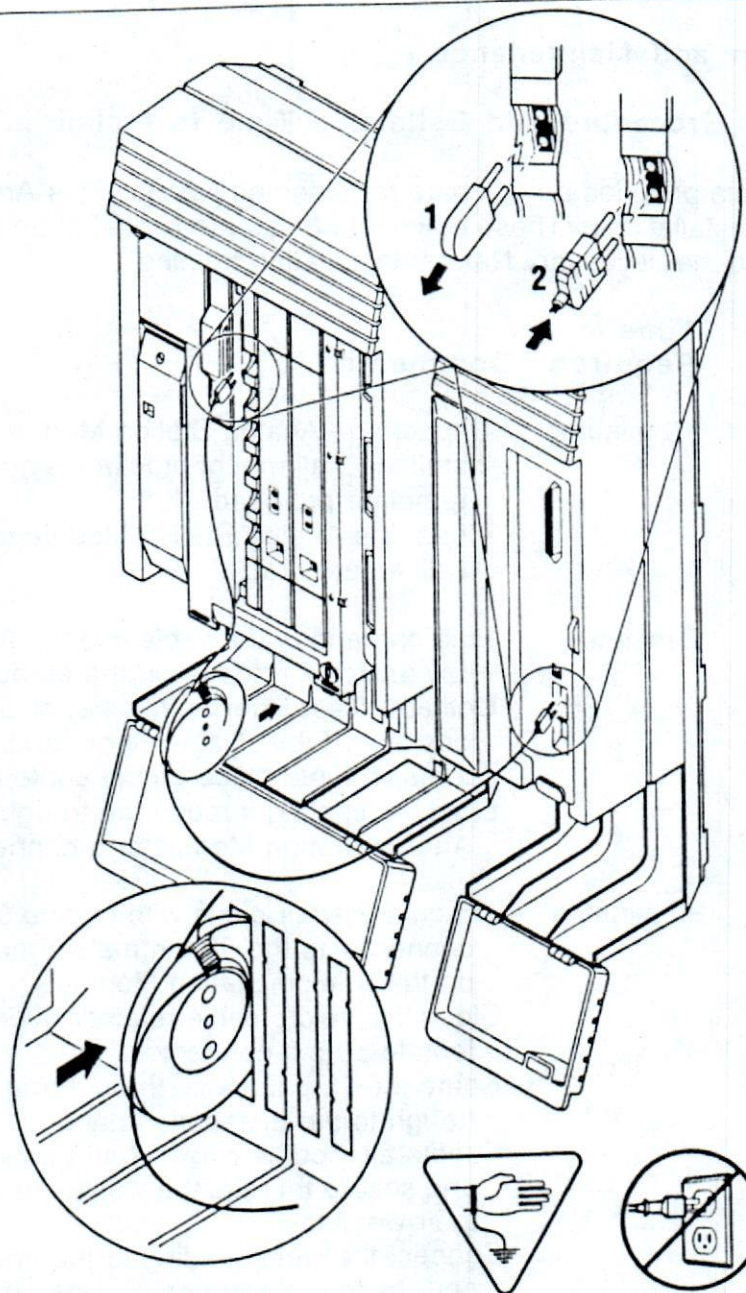


Figure 4. Installation and Connection of the Analog Station Module to the Modular ICS

#### 4.2 Field Maintenance

The Analog Station Module will require no regular or periodic field maintenance.



## 4.0 Installation and Maintenance

### 4.1 Installation Procedure and Estimated Time to Install

The following table provides an estimate for planning Norstar-Plus Analog Station Module Installations. These estimated times are typical of an installer who has received the necessary Norstar installation training.

| Activity                                                                 | Time Required | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mounting the Analog Station Module                                       | 10 minutes    | <ul style="list-style-type: none"><li>- Unpack the Analog Station Module</li><li>- Install the wall mount bracket using the template provided</li><li>- Mount the Analog Station Module on the wall mount bracket</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Connect the Analog Station Module to the Modular ICS via the Fiber Cable | 2 minutes     | <ul style="list-style-type: none"><li>- Plug one end of the cable into the fiber Expansion Cartridge on the Modular ICS</li><li>- Coil all excess fiber onto the specially designed Fiber Cable Spool and Snap the spool into place on the cable trough</li><li>- Lead the cabling through the trough to the Analog Station Module and connect.</li></ul>                                                                                                                                                                                                                                                                                                                                             |
| Connect the Analog Station Module to the distribution block              | 20 minutes    | <ul style="list-style-type: none"><li>- Attach a 25-pair cable with female 50-pin connector to the 50-pin male connector on the Analog Station Module.</li><li>- Close the Velcro cable retainer over the female 50-pin connector.</li><li>- Route the 25-pair cable through the cable trough to the distribution panel.</li><li>- Bundle all module cables with cable ties and secure them to the wall to support their weight.</li><li>- Connect the wires leading to the analog devices to the appropriate pins on the distribution block</li><li>- Cross-connect the telephone wiring from the Analog Station Module to the corresponding analog device pins on the distribution block.</li></ul> |
| Program the analog station ports                                         | 5 minutes     | <ul style="list-style-type: none"><li>- Program the analog station ports as required by the customer application.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |



### 3.3.3 Components and Ordering Information

The following are the ordering codes for the Norstar-PLUS Analog Station Module.

| Product Description                                                                                                                                                                                                            | CPC      | Eng. Code   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|
| Analog Station Module, English / French / Spanish including: <ul style="list-style-type: none"><li>• Fiber Cable Kit</li><li>• Wall Mount Bracket</li><li>• Documentation Kit</li></ul>                                        | A0650008 | NTBB51DA-93 |
| Analog Station Module with Visual Message Waiting Indication, English / French / Spanish including: <ul style="list-style-type: none"><li>• Fiber Cable Kit</li><li>• Wall Mount Bracket</li><li>• Documentation Kit</li></ul> | A0651836 | NTBB51DB-93 |
| Spare ASM Documentation Kit, English / French / Spanish                                                                                                                                                                        | A0650015 | NTAB1869    |
| Fiber Cable Kit                                                                                                                                                                                                                | A0647323 | NTAB1829    |
| Spare ASM Wall Mount Bracket                                                                                                                                                                                                   | P0839896 |             |

### 3.3.2 Product Specifications

#### 3.3.2.1 Service Tone Cadences

Busy: 0.5 sec on / 0.5 sec off  
 Expensive Route: 0.3 sec on / 0.3 sec off (3 bursts)  
 Overflow: 0.25 sec on / 0.25 sec off  
 Ringback: 2.0 sec on / 4.0 sec off  
 Recall: 1.0 sec on / 1.0 sec off (3 bursts followed by steady tone)  
 Ring splash: 0.2 sec on (1 burst)

#### 3.3.2.2 Power Specifications

Voltage V ac: 110-220  
 Current A rms (max): 3.0 (Under full load)  
 Frequency Hz: 45-70  
 Crest Factor: 4.0

#### 3.3.2.3 Environmental Requirements

Operating Temperature Range 0 C to 50 C (32 F to 122 F)  
 Storage Temperature Range -50 C to 70C (-31 F to 158 F)  
 Humidity 5% to 95% (non-condensing)

#### 3.3.2.4 Regulatory, Safety and Interconnect Specifications

The Analog Station Module meets the following specifications:

| COUNTRY       | REGULATORY SPECIFICATIONS   |              |             |
|---------------|-----------------------------|--------------|-------------|
|               | SAFETY                      | INTERCONNECT | EMI         |
| CANADA        | CSA C22.2 NO.<br>950 (1995) | IC CS-O3     | ICES-003    |
| UNITED STATES | UL1950                      | FCC PART 68  | FCC PART 15 |

#### 3.3.2.5 Mean Time Between Failure

The Norstar-PLUS Analog Station Module has the following projected MTBF:

- Analog Station Module 74 Years
- Analog Station Module with Visual Message Waiting Indication 69 Years



Implementation of these features will be dependent upon the capabilities of the analog device connected to the ASM.

### 3.2.12 Implementing Message Waiting Indication

*Message Waiting Indication on analog terminals through the ASMV may only be accomplished with the use of a Norstar-PLUS Voice Mail or Startalk Flash.*

## 3.3 Physical Product Characteristics

### 3.3.1 Plastic Enclosure

Both the Analog Station Module and the Analog Station Module with Visual Message Waiting Indication will be housed in the same plastic enclosure. The dimensions of this enclosure will be 630mm (25 in) in length, 170mm (6.5 in) in depth and 150mm (5.9 in) in width.

A cable trough will be provided at the base of the unit and the module will be wall-mountable using a plastic wall mount bracket.

The color of the Analog Station Module will be Dolphin Gray and the finish and molding will be consistent with the Modular ICS and the existing trunk and station modules.

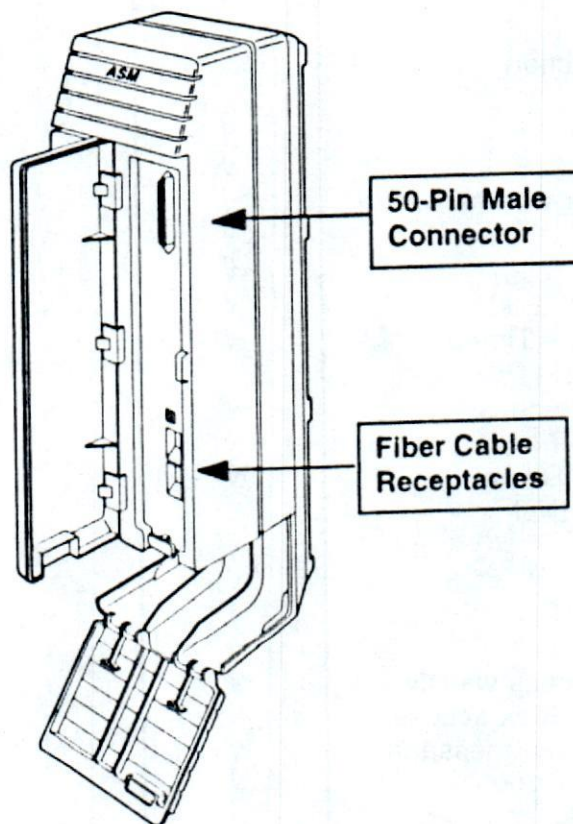


Figure 3. The Analog Station Module (Interior View)



### 3.2.11 Analog Station Module Feature Access Support

The following table details the Norstar features that may be accessed through the Analog Station Module and the Analog Terminal Adapter - 2.

|                                 | ATA2 | Analog Station Module |
|---------------------------------|------|-----------------------|
| Separate Power Supply           | ✓    | ✓                     |
| Alternate Line                  | ✓    | ✓                     |
| Call Forward                    | ✓    | ✓                     |
| Call Park                       | ✓    | ✓                     |
| Call Pickup – Group or Directed | ✓    | ✓                     |
| Call Queuing/Waiting            | ✓    | ✓                     |
| Camp                            | ✓    | ✓                     |
| Centrex/PBX Reach Through       | ✓    | ✓                     |
| Conference                      | ✓    | ✓                     |
| Hold – Exclusive                | ✓    | ✓                     |
| Hold – Public                   | ✓    | ✓                     |
| LNR                             | ✓    | ✓                     |
| Line Pool Selection             | ✓    | ✓                     |
| Link                            | ✓    | ✓                     |
| Page – General                  | ✓    | ✓                     |
| Page – External                 | ✓    | ✓                     |
| Page – External/Internal        | ✓    | ✓                     |
| Page – Internal                 | ✓    | ✓                     |
| Priority Call                   | ✓    | ✓                     |
| Privacy Control                 | ✓    | ✓                     |
| Reach Through – Timed Release   | ✓    | ✓                     |
| Restriction Override            | ✓    | ✓                     |
| Ring Again                      | ✓    | ✓                     |
| Saved Number Redial             | ✓    | ✓                     |
| System Speed Dial               | ✓    | ✓                     |
| Tones On                        | ✓    | ✓                     |
| Transfer                        | ✓    | ✓                     |
| Trunk Answer                    | ✓    | ✓                     |
| Voice Call                      | ✓    | ✓                     |
| Voice Mail – Access via DN      | ✓    | ✓                     |
| Voice Mail – Mailbox access     | ✓    | ✓                     |
| Voice Mail – Leave message      | ✓    | ✓                     |
| SMDR Account Codes              | ✓    | ✓                     |
| CDR Account Codes               | ✓    | ✓                     |
| Toll Restriction Improvements   | ✓    | ✓                     |



### 3.2.5 Interface to Analog Devices

The Analog Station Module comes equipped with a 50-pin male amphenol connector to allow connection of both analog data devices and 2500 sets.

### 3.2.6 Analog Station Module Compatibility

The Analog Station Module (ASM) will be compatible with all Modular ICS products with fiber interface capabilities. This includes all R1/T1, Centrex and XL/XC Software loads. For programming purposes, on software loads prior to DR 1.1 and XC 1.1, the Analog Station Module will appear as 8 separate Analog Terminal Adapters. DR1.1 and XC 1.1 Software, and later releases, will include an enhanced programming menu to speed the installation process.

The Analog Station Module with Visual Message Waiting Indication (ASMV) will be compatible only with Modular ICS DR 1.1 and Modular ICS XC 1.1 software or later.

### 3.2.7 Data Speed Capabilities

The Analog Station Module will support data transmission speeds of up to 28.8 kb/s. Actual transmission speeds may be diminished by limitations in the telephone network.

### 3.2.8 On Premise Extension

The Analog Station Module will support On Premise Extension with a loop length of 4,000 ft. Off Premise Extension will not be supported by the Analog Station Module. Customers with OPX requirements must continue to use the single port Analog Terminal Adapter for this purpose.

### 3.2.9 Dial Pulse

Dial Pulse capabilities will be supported.

### 3.2.10 Calling Line Identification

The Analog Station Module will not pass Calling Line Identification information through to an analog device. This is consistent with the functionality of the ATA-2.



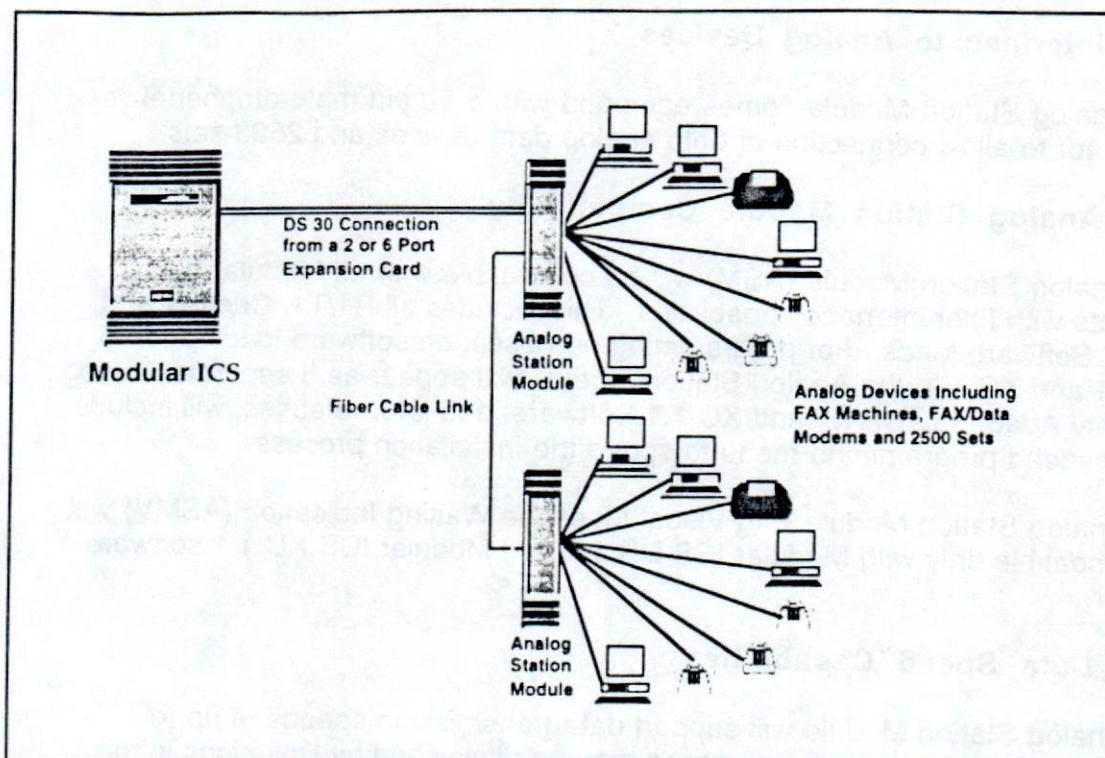


Figure 1. Interconnection of Two Analog Station Modules (Schematic View)

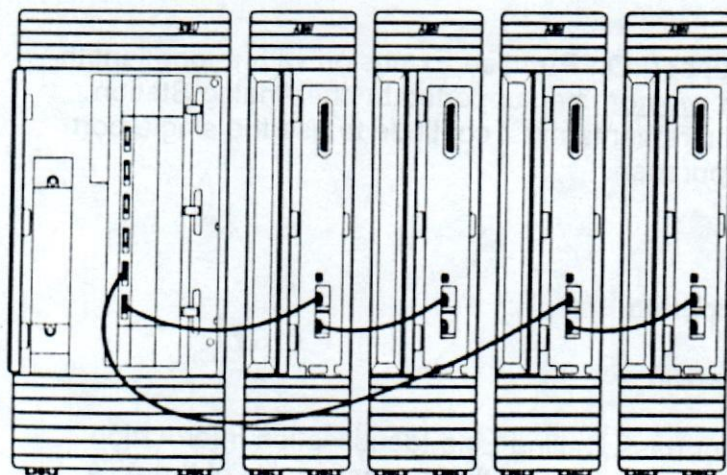


Figure 2. Interconnection of Multiple Analog Station Modules (Plane View)

### 3.2.4 Analog Station Module System Capacity

There is no specified limit on the number of Analog Station Modules that may be installed on a Modular ICS. The system capacity will be determined by the number of DS-30 ports available (Modular ICS or Modular ICS XC) and the number of ports required for Fiber Trunk Modules and Fiber Station Modules.



### 3.0 Product Description

#### 3.1 Introduction

The Norstar-PLUS Analog Station Module is an 8 port analog connectivity solution that allows multiple analog device connection to Modular ICS and Modular ICS XC systems.

#### 3.2 Product Features

##### 3.2.1 Analog Station Module Models

The Analog Station Module will be offered in two versions:

(a) The Analog Station Module (ASM) will house 8 analog ports and an auto ranging 110-220 volt power supply. It will provide standard connectivity to analog devices.

(b) The Analog Station Module with Visual Message Waiting Indication (ASMV) will house 8 analog ports with visual message waiting capability. The module will also include an auto ranging 110-220 volt power supply. The ASMV may also be configured to provide stutter dial tone for message waiting indication. ***An ASM cannot be upgraded to an ASMV.***

##### 3.2.2 KSU Interface

The Analog Station Module will connect to the Modular ICS via a DS-30 fiber link from a 2 port or 6 port Fiber Expansion Cartridge. One half of the DS-30 capacity will be utilized in the connection of a single ASM.

##### 3.2.3 Interconnection of Analog Station Modules

A second 8 Port Analog Station Module may be connected to an initial Analog Station Module via a daisy-chain method using a fiber cable link. This arrangement will use the second half of the DS-30 capacity from the KSU. A maximum of two Analog Stations Modules, providing 16 ports of capacity, can be connected through any single DS-30 port on an Expansion Card. As a result, the port capacity of the Modular ICS or Modular ICS XC remains the same as in an all digital configuration.



## **Customer Specific Solutions**

With the combination of the single port Analog Terminal Adapter and the 8 port Analog Station Module, distributors have a significant opportunity to customize their Norstar proposals to meet the exact analog solution requirements of their customers.

### **Visual Message Waiting Indication Option**

The Analog Station Module with Visual Message Waiting Indication provides distributors with a key solution that will allow Norstar to be positioned into Hotel/Motel applications and in large office environments that include voice mail. The module may also be configured to provide stutter dial tone for message waiting indication.

### **Configuration flexibility/growth**

The Analog Station Module provides distributors with an analog solution that will allow them to better address large hybrid applications in which the customer has demands for either high data or voice analog connectivity. This will include larger "XC" installations in which the customer wishes to make use of legacy analog sets from a previous system.

### **High reliability**

Norstar leads the industry in reliability which drives reduced maintenance costs for Norstar distributors.

### **Future oriented platform**

The Analog Station Module has the capacity to support future upgrades to firmware through downloads from future core software loads. This permits product feature enhancements that keep pace with changing market needs, installed base maintenance support, and up sell opportunities as technology advances.

### **Competitively priced**

The Analog Station Module will provide a high feature to price value ratio both today and in the future.

### **Reduced Installation Time / Complexity**

The Analog Station Module is offers significant advantages over the Analog Terminal Adapter in installations that require multiple analog connections. The time to install and program the ASM is significantly lower that the time to install and program an equivalent number of ATAs. In addition, the ASM makes use of a single power supply for each module. This reduces the power requirements at the customer location and the amount of space required to install the Modular ICS system with Analog Connectivity.



## **Customer Specific Solutions**

Several Norstar competitors require a minimum of 8 to 12 ports of analog connectivity to be purchased at one time, significantly increasing the price of the system to the end user. The combination of the single port Analog Terminal Adapter and the 8 port Analog Station Module provides end customers with significant opportunities to customize their Norstar analog solution to their exact requirements.

## **Visual Message Waiting Indication Option**

In voice messaging applications in either office or Hotel/Motel environments, the Analog Station Module with Visual Message Waiting Indication will provide a clear visual cue of a waiting voice mail message to users of analog station sets. The module may also be configured to provide stutter dial tone for message waiting indication.

## **Configuration flexibility/growth**

The Analog Station Module provides end users with an analog connectivity solution that can be easily grown to match their future needs. The ability to daisy chain two Analog station modules through a single fiber DS-30 connection provides the same port density as the current digital station module.

## **High reliability**

Norstar leads the industry in reliability - one of the primary end user requirements for small system solutions.

## **Competitively priced**

The Analog Station Module will provide a high feature to price value ratio both today and in the future.

## **Feature Access**

The Analog Station Module will continue to provide access to core Norstar station features in the same fashion as the Analog Terminal Adapter - 2. This will allow users on analog stations to make use of such features as call forward, park and page, conference, link and voice mail access.

## **2.4 Value Proposition for Distributors**

The Norstar-PLUS Analog Station module has been designed to increase the market share and profits of Norstar distributors. The following values outline how this is accomplished:



### 2.1.2 Analog Voice Requirements

Although the penetration rate of analog stations in the traditional key system market remains low, the Analog Station Module will enhance the positioning of Norstar systems in several specific applications. These include:

- Hotel / Motel applications in which analog sets are used for guest telephones;
- Replacement system sales in which the customer wishes to continue to use some or all of the legacy analog terminals; and
- Larger Hybrid Systems in which a large number of the users require only basic POTS telephony features.

### 2.2 Target Markets

The Norstar-PLUS Analog Station Module is targeted at customers who have the requirement to connect more than 6 analog devices to a Modular ICS or Modular ICS XC system. Below this number of required connections, customers may choose to make use of the single port Analog Terminal Adapter to satisfy their analog connectivity needs. The table below outlines suggested criteria for determining the target markets for the Analog Station Module versus the Analog Terminal Adapter:

| Market Criteria                               | Analog Station Module | Analog Terminal Adapter |
|-----------------------------------------------|-----------------------|-------------------------|
| Number of Analog Devices requiring connection | >5                    | 1 to 5                  |
| System Growth Potential                       | High                  | Low                     |
| Message Waiting Indication                    | Yes                   | No                      |
| OPX Requirement                               | No                    | Yes                     |
| System Installation Area                      | Small                 | Large                   |

### 2.3 Value Proposition for End Users

The following positioning statements should be utilized to illustrate the benefits to the end users:



## **2.0 Market Positioning**

### **2.1 Market Needs and Applications**

The Norstar-PLUS Analog Station Module responds to the continuing demand for analog connectivity for a wide range of data devices, most notably low cost FAX Modems which have become a standard accessory in the PC market. In addition, analog voice connectivity is still required in a number of specialized applications including hotel/motel and larger hybrid installations, particularly when legacy analog stations are available for re-use by the customer.

#### **2.1.1 Data Connectivity Requirements**

##### **2.1.1.1 Modems**

Personal computers have become nearly ubiquitous in all business environments including those businesses targeted by the Norstar-PLUS Modular ICS. More than 70% of businesses with 10 or more employees now make use of computers with an average of over three PC's installed per business. Built in FAX/Data Modems are becoming a standard component in new PC systems and internal and external modems can be purchased for existing PC's. Industry forecasts place the penetration rate of modems on PC's in home and small office environments at over 80% by 1997.

In addition to the enhanced productivity enjoyed by workers with PC FAX capabilities, analog modems continue to provide the most common form of access to the Internet. While the advantages of digital access to the Internet will dampen the growth of analog modems in the long run, businesses making use of the Internet on a limited basis will continue to be drawn to the convenient and inexpensive access provided by these products.

The proliferation of remote access servers have also enhanced the demand for analog connectivity solutions. Remote access servers provide remote users, mobile professionals and remote offices with the opportunity to interconnect their sites, suppliers and customers. As the price of remote servers continues to drop, the implementation of this solution behind a Modular ICS becomes an economically viable alternative for small businesses.

##### **2.1.1.2 FAX Machines**

Over 80% of businesses with 10 or more employees have at least one FAX machine with a large majority of businesses utilizing dedicated lines for their connection to the network. The opportunity to reduce the cost of dedicated lines is available to the customer with the access to a pool of lines through the Modular ICS.



## Norstar-PLUS Analog Station Module Channel Introduction Package

### 1.0 Introduction

The Norstar-PLUS Analog Station Module is a significantly enhanced analog interface device for the Norstar-PLUS Modular Integrated Communications System (Modular ICS). The Analog Station Module is an 8 port device which provides connectivity to analog data equipment such as FAX machines, FAX Modems, and Credit Card Verification devices, as well as analog voice equipment including 2500 telephone sets, cordless phones and answering machines.

This product will be made available in two configurations: the standard Analog Station Module (ASM) which will support the connection of analog devices, and the Analog Station Module with Visual Message Waiting Indication (ASMV) which will support the connection of analog devices and will provide message waiting indication to appropriately equipped telephones.

The Analog Station Module will be available in CALA as of **May 9, 1997**.

The Analog Station Module may only be connected to the Norstar-PLUS Modular ICS or Modular ICS XC/XL.

This Channel Introduction Package (CHIP) will cover the following topics:

- Market Positioning including market needs, target markets, positioning to end users, and distributor values;
- Product Description including features, components, documentation, ordering information, compatibility, installation and maintenance, and product specifications;
- Competitive Product Offerings;
- Promotional Strategy;
- Technical Support and Training;
- Sales Training and Promotion; and
- Warranty Policy.



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## 5.0 Ordering Information

These new products are scheduled for availability from Nortel in April 1997.

| <u>Product Description</u>                            | <u>NT Code</u> | <u>CPC</u> | <u>List</u> |
|-------------------------------------------------------|----------------|------------|-------------|
| Norstar Remote Utilities 2 (Eng)                      | NT8B81AS-93    | A0661467   | \$750.00    |
| Norstar Remote Utilities 2 (Frc)                      | NT8B81BS-93    | A0661468   | \$750.00    |
| Norstar Remote Utilities 2<br>Documentation Kit (Eng) | NTAB2026       | A0664246   | \$60.00     |
| Norstar Remote Utilities 2<br>Documentation Kit (Frc) | NTAB2027       | A0664249   | \$60.00     |

The Norstar Remote Utilities 2 product ships with all of the appropriate documentation to facilitate a simple installation and user process. Again, NRU 2 contains Norstar Manager 3.3, Remote Set Software, and documentation. Documentation does include the appropriate training materials for remote maintenance.

## 6.0 Warranty and Repair

The standard "Norstar Key Telephone Systems - Warranty and Repair Policy and Repair Procedures" will apply to the Norstar components listed in this document.

## 7.0 Training

### 7.1 Technical Training

There is no additional technical training provided for the NRU 2. Product ships with self-paced tutorial and appropriate documentation.

### 7.2 Sales Training

There is no additional sales training provided for the NRU 2.

## 8.0 Contact List

|                         |                 |                |
|-------------------------|-----------------|----------------|
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| Product Management      | Cynthia Becerra | (954) 851-8354 |
| CTAS Technical Support: |                 | (954) 851-8400 |



### **3.1.8 Installation and Upgrades**

The NRU 2 installation process is very similar to that of previous versions of Norstar Manager. However, you will now have the option of either installing both Norstar Manager 3.3 and RSS, or only RSS on the PC. Installation of NRU 2 (both components) takes approximately 3-5 minutes. Upgrades are supported from the following releases of Norstar Manager:

- Version 2.1- with an option to replace or keep version 2.1 installed
- Version 3.0- with or without 2.1 also installed
- Version 3.1- with or without 2.1 also installed
- Version 3.2- with or without 2.1 also installed

## **4.0 Specifications**

The minimum PC requirements for Norstar Remote Utilities 2 are:

- IBM compatible 80386 (80486 recommended) 20-25 MHz processor
- 8 MB RAM memory
- MS-DOS 5.0 and Windows 3.2
- 3.25" 1.44 MB diskette drive
- VGA color monitor
- 101 key enhanced keyboard
- 100 MB hard disk
- 2400 baud Hayes-compatible internal or external modem
- 1 serial port (required for direct connection to RAD)
- 1 parallel port (required for hard copy of reports when using Norstar Manager 3.3)



### 3.1.5 Compatibility with KSU software

Norstar Manager 3.3 is compatible with only the following Norstar system software:

|                                              |              |              |
|----------------------------------------------|--------------|--------------|
| • 3x8 DR5                                    | all releases | all releases |
| • Compact DS DR5                             | all releases | all releases |
| • Compact DR5*                               | A0630283     | A0630281     |
| • Modular DR5*                               | A0638528     | A0628540     |
| • Modular Centrex+*                          | A0628592     | A0628593     |
| • Norstar-PLUS Modular ICS Release 1 /T1     | A0629079     | A0629079     |
| • Norstar-PLUS Modular ICS Release 1/Centrex | A0629080     | A0629080     |
| • Norstar-PLUS Modular ICS XL                | A0638646     | NA           |
| • Norstar-PLUS Modular ICS XC                | A0632415     | A0632420     |
| • Norstar-PLUS MICS-DR 1.1                   | A0642274     | A0642274     |
| • Norstar-PLUS MICS-XC 1.1                   | NA           | A0649683     |

*\*software purchased after July 1, 1993*

RSS is compatible with all Norstar system types and all versions of Norstar system software (DR2 or greater) **provisioned with the new RAD** (A0648815-English and A0648816-French), available since March 30, 1996.

### 3.1.6 Compatibility with Remote Access Device

Norstar Manager 3.3 is compatible with all versions of the RAD except for the internal RAD (I-RAD) of the Norstar-Plus Compact ICS.

RSS is compatible with only the Internal RAD (I-RAD) of the Compact ICS and the new RAD (A0648815-Eng and A0648816-Frc), available since March 30, 1996.

### 3.1.7 User Interface

The Norstar Remote Utilities 2 user interface for both Norstar Manager 3.3 and RSS remains the same as the previous versions of Norstar Manager 3.2 and RSS.



### 3.1.3 Documentation

The documentation has been updated to include installation and user instructions for Norstar Manager 3.3 and Remote Set Software. Documentation is available in English and French.

### 3.1.4 Physical Description

The Norstar Remote Utilities 2, packaged on three 3.25" disks, runs on an IBM 386 (or greater) PC or compatible, running MS-DOS 5.0 or later and MS Windows 3.1. The Norstar Remote Utilities 2 will operate on a configuration of processor, memory and peripherals which is comparable to that provided by an IBM 386 computer. The computer requires a VGA monitor and at least 8 Mbytes of memory. The Norstar Remote Utilities 2 will run on a laptop provided that it is equipped with the above hardware configuration. A 100 MB hard drive is recommended. **Note: For improved speed and to accommodate future application enhancements, an IBM 486 PC or compatible with 8 MB of RAM and 160 MB hard drive is recommended to run the Norstar Remote Utilities 2.**

The hardware component of the Norstar Remote Utilities 2 is a Remote Access Device, (RAD), which acts as a communication bridge between the KSU and PC. The RAD provides B to D channel conversion at 1200 or 2400 baud remotely, or 9600 baud on a direct connection, security against unauthorized remote access, and a means of calling a remote alarm device (a printer or a console).

Note that the Norstar-PLUS Compact ICS utilizes an Internal Remote Access Device (I-RAD) instead of the standard RAD.

A commercially available, Hayes compatible modem capable of operating at 1200 or 2400 baud is necessary for establishing remote connections between the PC which is running RSS and the RAD. The modem may be external or internal to the PC. **Note: It is highly recommended that the modem have two separate line and phone ports if the operator assisted call feature of Norstar Manager 3.3 or RSS is to be used.**



### 3.1.1 Norstar Manager 3.3

The features and functionality of Norstar Manager 3.3 remain the same as Norstar Manager 3.2 with the exception of the additional support for the new MICS 1.1 platform and the upcoming DR5.1 release (scheduled for availability in February 1997 and April 1997 respectively). The following reflects the feature enhancements of MICS 1.1 and DR5.1 which require administration and are now supported by Norstar Manager 3.3:

- T1 Ground Start Support
- Adminable Passthrough Mode Delay \*\*
- Analog Station Module Recognition
- Access Control to Link Feature \*\*
- Call Log Storage Capacity Reduction
- LNR/SNR On/Off Admin
- ARS Digit Absorption \*
- Automatic Daylight Savings Time \*
- Do Not Disturb On Busy \*/\*\*
- Loss Plan Modifications \*
- Page Timeout \*
- Page Tone On/Off \*/\*\*
- Service Modes Extended Ringing Service \*

\* Existing features ported into MICS 1.1 from MICS-XC 1.0

\*\* Enhancements ported into DR5.1

### 3.1.2 Remote Set Software (RSS)

RSS is a fast effective remote administration tool that provides Windows based capabilities for configuring, administering and maintaining Norstar Key System Units and peripherals via simulated M7310 and M7324 extension types. If installed as a standalone product, RSS provides you with the facilities to store profiles of Remote Access Device (RAD and I-RAD) connections and desired extension type information on the PC hard drive. RSS provides the following capabilities:

- MMI that simulates a Norstar set (M7310 or M7324) when programming
- Remote configuration, administration and maintenance functions for most Norstar system types and softwares
- Ability to remotely program Voice Mail features excepting those requiring voice capability
- Remote programming of all Norstar peripherals
- Remote administration of the Remote Access Devices (RAD and I-RAD)
- On-line programming of the KSU with simulated M7310 and M7324 extension types
- Direct queries of device status
- Copying of extensions and lines within a system

*Note: RSS does not provide Backup/Restore, Off-line programming, Reporting ,*



## 3.0 Product Description

### 3.1 Product Overview

Norstar Remote Utilities 2 (NRU 2) is a software package comprised of 3 components: Norstar Manager 3.3 software, Remote Set Software (RSS), and documentation. Each software component assists users in administering, maintaining, and programming various Norstar key and voice mail systems (Figure 1).

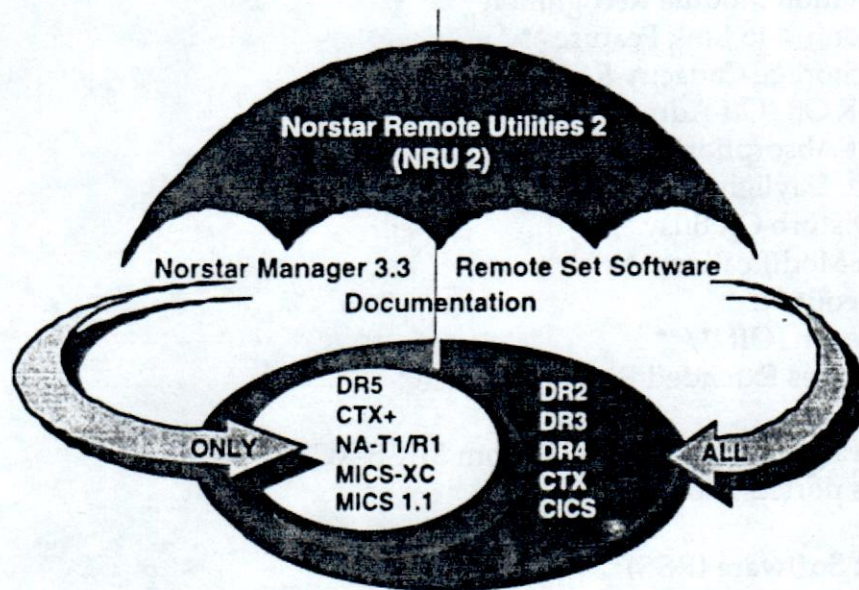


Figure 1.

The NRU 2 application, installed on a PC located at a remote location or at the phone system site, communicates through a Remote Access Device (RAD). A RAD connects the different components of the NRU 2 to a Norstar system via a station port and can auto answer an existing line on the Norstar system. Also, calls can be manually transferred to the RAD by an on-site operator. In remote connections a separate connection device must be used by the PC to communicate with the RAD. You can choose either a modem or a Norstar Data Communications Interface (DCI) as the connection device.

Note: The DCI is not supported by Modular ICS, Modular XC, and Compact ICS software feature cartridge. On these systems you can only use a modem.

The following provides a description of the different components of the NRU 2:



*Increased service ability*

-Real-time terminal emulation, database administration, diagnostics, and system analysis provide optimal service ability by reducing the need for common site visits due to incorrect programming (end user/technician), time and date changes, system speed dial changes, unplugged sets, DND activation, etc.

*Increased system optimization*

-Real-time system inventory access provides for immediate implementation of 100% of database-only related adds, moves, and changes as well as preparation for adds, moves, and changes requiring additional hardware.

## **2.2 End User Benefits**

*Optimal repair service*

-Immediate response to service requests promotes customer satisfaction and reduces customer inconvenience and downtime created by subject of service request. Areas such as hardware outages, service impairing database changes, and human error can be easily diagnosed and resolved in an expedient manner.

*Increased productivity*

-Faster distributor response to adds, moves, and changes increases customer productivity and inconvenience levels in areas such as departmental personnel changes, outside line reconfigurations, system feature implementation, voice mail administration, etc.

*Reduced programming*

-Ease of distributor remote access reduces end user requirements for programming and training.



# Norstar Remote Utilities 2

## 1.0 Introduction

Northern Telecom (Nortel) is pleased to announce the availability of Norstar Remote Utilities 2 (NRU 2), the latest release of Norstar remote administration software. Norstar Remote Utilities 2 is a business tool specifically designed to provide superior service and cost effective support of Norstar and Norstar-PLUS business communication systems. Norstar Remote Utilities 2 offers the additional administration of Norstar-PLUS MICS 1.1 and DR5.1 databases over earlier versions of the Norstar Remote Utilities product. Norstar Remote Utilities 2 will replace the existing version of the Norstar Remote Utilities product.

## 2.0 Product Positioning

Norstar Remote Utilities 2 (NRU 2) enables users to substantially reduce operation costs and improve responsiveness by providing enhanced system support without a site visit. NRU 2 allows distributors to implement improvements in their support processes for increased profitability. Installed base management with NRU 2 reduces operations costs, creates new service revenue opportunities, and enhances the distributor's image and competitiveness as a responsive service provider making use of leading edge technology.

### 2.1 Distributor Benefits

#### *Operational cost savings*

-Reduces the need for site visits on 60% of trouble calls. Initial implementation costs can be recuperated within 3 service calls (based on \$75.00/hr per visit).

#### *New service revenue opportunities*

-Promotes additional maintenance revenue by offering low-cost, real-time system support in addition to existing capabilities such as backup/restore, database reports, etc.

#### *Increased service responsiveness*

-Immediate response to major and minor service requests greatly increases customer satisfaction levels. Also reduces time spent on each service request, thus increasing productivity levels.



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Norstar Remote Utilities 2  
CALA  
Channel Introduction Package

Date: February 28, 1997





**Norstar Remote Utilities 2  
CALA  
Channel Introduction Package**

February 28, 1997





*A World of Networks*

## **Product Bulletin**

Number: CALA-073-PB

Date: April 1997

### **StarTalk Flash Software Releases**

Consistent with our regular process of upreleasing a product for new functionality, this new compatibility caused StarTalk FLASH to be upreleased to StarTalk FLASH 1.30. It should be noted, however, that the software version is not necessarily the same as the product release. The table below indicates the StarTalk FLASH product releases and corresponding software versions:

| PRODUCT<br>RELEASE  | StarTalk<br>FLASH 1.00 | StarTalk<br>FLASH 1.10 | StarTalk<br>FLASH 1.20 | StarTalk<br>FLASH 1.30       |
|---------------------|------------------------|------------------------|------------------------|------------------------------|
| DESCRIPTION         | product launch         | "patch"                | Maintenance<br>Release | Compact ICS<br>compatibility |
| SOFTWARE<br>VERSION | 1.00                   | 1.10                   | 1.28, 1.36             | 1.44                         |

It is important to understand that software version 1.36 does not contain compatibility for the Compact ICS, but all StarTalk FLASH systems shipped after August 2 are compatible. We apologize for any confusion this numbering may have created.

**To verify that a particular StarTalk FLASH is compatible with Compact ICS, confirm one of the following:**

- i) the PCMCIA cartridge label indicates either "ENG/FR S/W VER. 1.44" or "ENG/SP S/W VER. 1.44" (these numbers refer to software version, not product releases);
- ii) the feature cartridge or the carton label shows one of the new CPC's as identified in MC065, June 1996; or you may
- iii) perform a Feature 983 to confirm that the software version is 1.44.

The next release of StarTalk FLASH, available in the April 1997 time frame for MICS-XC and MICS 1.1 compatibility, will be 1.40. Until this compatibility release, there are no other planned software cartridge releases for StarTalk FLASH. In future, when referring to StarTalk FLASH, we will refer to the product release number; software versions will be used primarily for technical support purposes.

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*A World of Networks*

## **Product Bulletin**

Number: CALA-070-PB  
Date: April 1997

### **Norstar-PLUS Voice Mail 2.1**

#### **AMIS Networking**

##### **Introduction**

The Audio Messaging Interchange Specification (AMIS) is the telecommunication industry solution to networking remote voice mail systems which are manufactured by various vendors who developed and market the AMIS application. Those voice mail vendors who currently comply with the AMIS specification are Northern Telecom (Nortel) for Meridian Mail and Norstar-PLUS Voice Mail, Lucent Technologies Audix, Centigram, Octel, ROLM PhoneMail, VMX, Active Voice, AVT, and Toshiba. AMIS is available on Norstar-PLUS Voice Mail (Release 2.0 and 2.1).

##### **AMIS Description**

AMIS provides voice messaging to different mailboxes located at different sites on a communication network. A network, as it is referred to here, is a collection of offices, locations or sites connected by a telecommunication link. Each site on the network must have AMIS installed and enabled to send, receive or reply to network messages.

Each site on an AMIS network is assigned a network identification number. This number consists of a site country location, area code, and telephone number.

There are AMIS features allow network messaging capability. These features include:

1. Network receive: allows a site to receive network voice messages from other AMIS sites.
2. Network delivery: allows a site to send voice messages to other AMIS sites.
3. Network reply: allows a site to respond to network messages.
4. Network broadcast messaging: when enabled, allows broadcast messaging across the AMIS network.
5. Network system group list messaging: when enabled, allows network delivery messages to be sent to other AMIS sites on a group list.



**Note:** When AMIS is first installed, all of the above features are enabled with the exception of broadcast and system group list messaging. These two features are defaulted to "no" and must be enabled to be used. Also, in order for the AMIS software to function, the Norstar-PLUS Voice Mail system must have the Automated Attendant set to answer the lines on which the other AMIS systems will call.

Each AMIS site on the network has a special "loopback" mailbox number which is used to determine if two sites are communicating successfully. Whenever a message is received by a loopback mailbox, it immediately sends the message back again to the originating mailbox on the originating system. If a voice message is sent to the loopback mailbox of a site and fails to receive a response after a while, one site or the other may be improperly configured.

The loopback mailbox is created automatically when AMIS is installed. **If a mailbox with the required number already exists in the system, it will be deleted by the install process.** The mailbox number will be "13, 103, 1003,..." depending on the mailbox number length in use at that site.

(See the attached Appendix A for an AMIS feature comparison with the AMIS Standard, Meridian Mail and Norstar-PLUS Voice Mail.)

### **Sending Network Messages**

When a local user addresses a message to a remote AMIS user, the local system essentially dials the remote system access number, identifies itself as another AMIS-compatible site, identifies the target mailbox number, and delivers the message. Non-voice information is exchanged via DTMF signaling. Voice information is transferred by having one site play while the other records the message.

An AMIS network delivery call will typically deliver a single message to a single recipient, however, the Norstar-PLUS Voice Mail implementation of AMIS supports "batching" of up to 8 messages destined for a single site. While transparent to subscribers, this feature will result in lower long distance charges for the sending system. Users should avoid forwarding a message multiple times involving AMIS transfers because of the slight degradation in voice quality.

The times for sending network messages is controlled by calling block periods where the administrator can specify up to 4 blocked periods per day, for each day of the week. Typically, an administrator may want to block the busiest times of the work day and send the messages when lines are less busy and perhaps long distance rates are cheaper.

Network messages can be sent to any site on an AMIS network with the network receive feature enabled. Network messages can be sent in 2 ways:

**1. Direct addressing:** Allows a user to specify where a message is to be delivered. When a mailbox owner uses direct addressing, the user specifies the telephone number of the destination site and the destination mailbox number. The mailbox number coded in the address must correspond to a regular subscriber mailbox at the remote site system. The line or line pool number Norstar-PLUS Voice Mail uses to make the call is taken from the loop back mailbox outdial set up.

After completing the address, the user is given the option of assigning delivery options, such as urgent or certified, or viewing the address components for correctness prior to sending the message.



Direct addressing is available only to mailbox owners, not to general callers. Direct addressing is not permitted when using Feature 980 (leave message) even when the caller is using an extension that belongs to a mailbox owner.

**2. Network delivery mailboxes:** allows callers at one site to quickly and easily send a message to a mailbox at a remote location. Each network delivery mailbox is assigned a mailbox number on the system identifying the destination site telephone number, line or line pool number and destination mailbox number.

When the network delivery mailbox is selected, Norstar-PLUS Voice Mail automatically accesses the specified line, dials the destination site telephone number and transmits the network message to the target mailbox. The user needs only to record a message and select the network delivery mailbox number. For example, you might set up a network delivery mailbox number 5674. You would add the mailbox to the Norstar-PLUS Voice Mail system and specify line number 8, destination telephone number 555-1213 and the destination mailbox 234. Each time a registered Norstar-PLUS Voice Mail mailbox owner accesses mailbox 5674 at your site, Norstar-PLUS Voice Mail knows immediately it is a message intended for mailbox 234 at another location.

The number of network delivery mailboxes needed is determined by how many users are in the AMIS network and what type of network messaging is required. Network delivery mailboxes compete for available mailbox numbers and it is recommended that administrators reserve certain number ranges for various purposes, perhaps by leading digit, so that the type of mailbox can be inferred from its number. There is a maximum of 1000 mailboxes on Norstar-PLUS Voice Mail Release 2.0. The maximum number of mailboxes includes any combination of special, personal, guest, information and network delivery mailboxes.

## **AMIS Usage**

AMIS is assigned through class of service and is used by registered mailbox owners who have initialized their mailboxes. Users can only send a network message after they have opened their mailboxes. After recording a message, a user can either send the message through direct addressing or use a network delivery mailbox.

Network delivery mailboxes can also appear in the company directory. Although they appear in the company directory, only a registered mailbox owner can select a network delivery mailbox.

**Note:** When the Automated Attendant provides the company directory option and a network delivery mailbox is selected from the directory by a caller without a mailbox, the caller is informed that access to the mailbox is not allowed. Only registered mailbox owners can access network delivery mailboxes.

## **AMIS Administration**

AMIS is installed by use of a software keycode. After installation, AMIS is fully operational and available to all registered mailbox users. AMIS is controlled by a number of parameters which are maintained from "Network Admin" under Feature 983. After enabling AMIS, the administrator may need to increase the number of outdial channels. As a general rule, the number of outdial channels should never exceed 50% of the total available channels.

## AMIS Networking Feature Comparison

| <u>Feature</u>                    | <u>Norstar-<br/>PLUS<br/>Voice Mail</u> | <u>Standard<br/>AMIS</u> | <u>Meridian<br/>Mail<br/>AMIS</u> |
|-----------------------------------|-----------------------------------------|--------------------------|-----------------------------------|
| Message Length (min.)             | 8                                       | 8                        | 99                                |
| Max Messages / Send               | 9                                       | 9                        | Unlim.                            |
| Send/Receive/Reply                | Y                                       | Y                        | Y                                 |
| Forward                           | Y                                       | N                        | Y                                 |
| Non-delivery Notification         | Y                                       | Y                        | Y                                 |
| Timed Delivery                    | Y (1)                                   | N/A                      | Y                                 |
| Acknowledge Receipt               | Y                                       | N                        | N                                 |
| Urgent / Privacy tags             | N                                       | N                        | N                                 |
| Message Send Priority             | Y                                       | N                        | Y                                 |
| AMIS Open Addressing              | Y                                       | Y                        | Y                                 |
| Distribution Lists                | Y                                       | N/A                      | Y                                 |
| Send/Reply Message Features:      |                                         |                          |                                   |
| Spoken Name Confirmation          |                                         |                          |                                   |
| Call Sender                       | Y (2)                                   | N                        | Y                                 |
| Reply-All                         | N                                       | N/A                      | Y                                 |
|                                   | N                                       | N                        | N                                 |
| Call-Answer Message Features (2): |                                         |                          |                                   |
| Spoken Name Confirmation          |                                         |                          |                                   |
| Call-back Caller                  | N                                       | N                        | Y                                 |
| Reply to Caller                   | N                                       | N/A                      | Y                                 |
|                                   | N                                       | N                        | Y                                 |

Note:

(1) Norstar-PLUS Voice Mail Release 2.0  
supports call blocking periods

(2) Target must be a network delivery mailbox



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*A World of Networks*

## **Product Bulletin**

Number: CALA-072-PB

Date: April 1997

### **Norstar Year 2000 Transition Compliance**

The Year 2000 is an important subject to anyone involved with telecommunications and computer systems. The change from 1999 to 2000 can create potential incompatibilities due to processor calendar calculations. In addition, the Year 2000 is a leap year, a century event that only occurs every 400 years, which adds further complexity to the transition.

Nortel, as the industry leader in digital communications systems, wants to ensure that you are fully conversant in this important topic so that you are able to make logical, informed decisions. We recognize that it is important for you to be able to understand the Year 2000 compatibility of the Norstar portfolio so that you can plan and prepare your transition over the next three years.

Included in this communiqué is a concise explanation which provides you with the Year 2000 compatibility for each Norstar system and Norstar application. It also includes a statement on the Vantage product line, which was Manufacture Discontinued in 1990. For products which require evolution for the Year 2000 we have provided a recommended plan.

In keeping with Nortel's commitment to investment protection, we will continue to work with our Authorized Distributors to offer you cost effective and efficient business solutions.

#### **Norstar/Norstar-PLUS Systems**

All Norstar/Norstar-PLUS systems will transition into the Year 2000 with no issue. This has been thoroughly tested and verified in Nortel Technologies laboratories.

#### **Norstar Voice Mail**

The Norstar Voice Mail 1.0 will encounter minor incompatibilities with the Year 2000 transition. The Norstar Voice Mail 1.0 report will sometimes show the Year 2000 as "100" instead of "00", for example, February 3, 2000 would read 02/03/100 instead of 02/03/00 as it should. The voice mail operation is unaffected, but the report will continue date errors as stated.

This situation was addressed in Norstar Voice Mail 2.0, which was available in July 1996, and which was provided as a free upgrade to Norstar Voice Mail 1.0 customers.



### **StarTalk FLASH**

The StarTalk FLASH will encounter minor incompatibilities with the Year 2000 transition.

All StarTalk FLASH releases that are prior to the StarTalk FLASH 1.5 software release will sometime show the Year 2000 as "100" instead of "00", for example, February 3, 2000 would read 02/03/100 instead of 02/03/00 as it should. The voice mail operation is unaffected, but the report will continue date errors as stated.

The situation will be addressed in the release of StarTalk FLASH 1.5, which makes it compatible with the CICS 2.0 and MICS 2.0 release.

### **StarTalk**

The will encounter minor incompatibilities with the Year 2000 transition.

All StarTalk products exhibit the following state when the date changes to January 1, 2000. The internal clock gets stuck at the year 1999, although the day and date will rollover to January 1 properly. The voice mail operation is unaffected, but the reports will contain date errors.

This situation was addressed in the StarTalk upissue release 2.04L which makes it compatible with the DR 1.1 software release (Jan/97). It is provided as a free upgrade to customers upgrading their Modular ICS systems to DR 1.1.

Optionally on January 1, 2000, they can simply reboot their system and the date will revert to the default of January 1, 1991. This will correct any reporting issues, since those issues are all associated with the year portion of the date. The year will be reported as 1991, but in all other aspects the system will function normally.

### **StarTalk Mini**

The StarTalk Mini will encounter minor incompatibilities with the Year 2000 transition.

All StarTalk Mini products exhibit the following state when the date changes to January 1, 2000. The internal clock gets stuck at the year 1999, although the day and date will rollover to January 1 properly. The voice mail operation is unaffected, but the reports will contain date errors.

There will be no upissue provided for StarTalk Mini customers. On January 1, 2000 they can simply reboot their system and the date will revert to the default of January 1, 1991. This will address any reporting issues, since those issues are all associated with the year portion of the date. The year will be reported as 1991, but in all other aspects the system will function normally.

### **Remainder of Norstar Product Line**

The remainder of the Norstar product line, past and present, will transition into the Year 2000 with no issues. This has been thoroughly tested and verified in Nortel Technologies laboratories.



### **Future Norstar Products**

A test of the Year 2000 transition has been added to the Norstar Product Verification test suite to ensure compliance for new products being developed.

### **Third Party PC based Applications**

Nortel is not responsible for Year 2000 compliance of third party PC based applications which interface with the Norstar system. Although many applications might utilize the Norstar system clock or even gather accurately-dated information from the Norstar TCM loop, the responsibility for Year 2000 compliancy of these products remains that of the vendor or manufacturer.

### **Vantage - Manufacture Discontinued**

Vantage systems are not Year 2000 compliant. This product portfolio was Manufacture Discontinued in 1990 and as such there will not be any product development to make it compliant.

Thank you for your interest in the current and future functionality of the Norstar product line. Nortel is committed to building strong partnerships with our customers by understanding and responding to their needs. Nortel has a proven record of developing telecommunication products with the highest quality to offer you a cost effective and efficient business solution.

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# NORTEL

*A World of Networks*

## Product Bulletin

Number: CALA-074-PB

Date: April 1997

### Norstar-PLUS Voice Mail Release 2.1

Nortel (Northern Telecom) Small Business Marketing is pleased to introduce Release 2.1 of Norstar-PLUS Voice Mail, effective **April 30, 1997**, which replaces Release 2.0. Release 2.1 is the next evolution of Norstar Voice Mail and encompasses all of the existing features and functionality of Release 2.0, options for AMIS networking and a feature-rich set of fax messaging applications, as well as the following new enhancements:

- **Editable Classes of Service:** This functionality is being introduced in response to customer requests and allows the administrator or technician to edit any of the values associated with a specific Class of Service. This is an especially useful capability for customizing certain elements, like message length (in minutes) where there might be a need for longer than 10 minutes. When a value in a given class of service is edited, that change effects every mailbox that has that class of service - it is not mailbox specific.

**Note:** Changes to classes of service must be performed using terminal administration and cannot be performed from a telephone set. Terminal administration can be accessed using any of the following methods:

- a) Installing the optional Monitor package (including SVGA card, keyboard and mouse) and running the OS/2 SPMSRV application.
- b) Using a VT100 compatible terminal connected to the Norstar Applications Module with an RS-232 connector.
- c) Using a personal computer with VT100 terminal emulation software connected to the Norstar Applications Module with an RS-232.

- **Multiple Extensions to one mailbox:** this functionality means that up to three (3) extensions can be directed to one mailbox. The most common instance of this would be when a user has two lines and is using both a conventional Norstar set at the desk and a wireless Companion set. Since calls to both numbers would be answered by the same mailbox, the user only has to check and maintain one mailbox for both his extension numbers. In this situation, Norstar call processing will be configured to present calls to each of a subscriber's sets simultaneously, regardless of the Dialed Number, with the first set to answer controlling the call.

Another way this capability is implemented on Norstar Voice Mail 2.1 is to prevent a fax call from being answered by the called party. The mailbox owner is assigned a second extension number which is a virtual number that is directed to the mailbox and does not ring at any telephone set. This means that fax calls are always received on the first try and mailbox owners do not have to transfer callers into the mailbox or experience a loud and annoying fax tone when they answer those fax calls inadvertently. A fax message sent to the alternate number will be stored in the one mailbox and message notification will be given on the display of the telephone set.



In conjunction with the introduction of Release 2.1, Norstar is also introducing Norstar Application Module II (NAM II). The driving forces behind the changes in the Applications Module are twofold: upgrading to a Pentium processor, and increasing the size of the hard drive to support 70 hours of voice and fax message storage. With the increase in storage, the Applications Module II will be able to support multiple applications, such as Norstar-PLUS Voice Mail and Norstar-PLUS Interactive Voice Response (scheduled to be introduced in Q497) on one platform.

New product codes for Norstar-PLUS Voice Mail models, AMIS and Fax Messaging options are included in this communiqué. Some product codes were not changed as you will see in the table, but are included as well.

Norstar Voice Mail Release 2.1 is also supported on the existing NAM (NAM I) which may be running with Release 1.X or 2.0 software. The Release 2.1 upissue software for existing 1.X or 2.0 systems will be produced on a CD ROM disk with a set of diskettes and will be provided to the channels at no charge to be used in conjunction with the CD ROM readers (or drives) previously provided to the channels for the Release 2.0 upissues. This upissue kit is for **software only** and does not include any hardware changes.

#### Ordering Codes

##### Code

##### Old Code    New

Norstar Voice Mail English Model 2

A0642921 A0666308

Norstar Voice Mail English Model 4

A0642924 A0666311

Norstar Voice Mail English Model 6

A0642927 A0666316

Norstar Voice Mail English Model 8

A0642930 A0666319

Norstar Voice Mail French Model 2

A0642922 A0777309

Norstar Voice Mail French Model 4

A0642925 A0666312

Norstar Voice Mail French Model 6

A0642928 A0666317

Norstar Voice Mail French Model 8

A0642931 A0666320

Norstar Voice Mail 2.1 S/W Up-issue Package,  
Bilingual CD-ROM

A0617430 A0666322

Fax Messaging - English

A0409575 A0670872

Fax Messaging - French

A0409576 A0670873

|                                                                |          |           |
|----------------------------------------------------------------|----------|-----------|
| Norstar Voice Mail Documentation Kit (English) (consisting of) | A0642911 | A0666009  |
| English Doc Kit                                                | A0642913 | A0666010  |
| Norstar Voice Mail Set Up and Operation Guide - English        | P0819894 | P0857695  |
| Reference Guide - English                                      | P0819895 | P0857696  |
| Norstar Voice Mail Programming Record - English                | P0819898 | P0857698  |
| Norstar Voice Mail Installation Guide - English                | P0819897 | P0857697  |
| Norstar Voice Mail User Guide Kit - English                    | A0642914 | A0667413  |
| Norstar Voice Mail User Guide Kit - English                    | A0642914 | A0667413  |
| Norstar Voice Mail User Guide - English (20 included)          | P0819899 | P0859495  |
| Convenience Card - English (5 sheets of 4)                     | P0819896 | No change |



|                                                                             |          |           |
|-----------------------------------------------------------------------------|----------|-----------|
| Norstar Voice Mail Documentation Kit (French) (consisting of)               | A0642912 | A0666011  |
| English Doc Kit                                                             | A0642915 | A0666012  |
| Norstar Voice Mail Set Up and Operation Guide - French                      | P0819900 | P0857699  |
| Reference Guide - French                                                    | P0819901 | P0857700  |
| Norstar Voice Mail Programming Record - French                              | P0819904 | P0857702  |
| Norstar Voice Mail Installation Guide - French                              | P0819903 | P0857701  |
| Norstar Voice Mail User Guide Kit - French                                  | A0642916 | A0667414  |
| Norstar Voice Mail User Guide Kit - French                                  | A0642914 | A0667414  |
| Norstar Voice Mail User Guide - French (20 included)                        | P0819905 | P0859496  |
| Convenience Card - French (5 sheets of 4)                                   | P0819902 | No change |
| Norstar Voice Mail User Guide - English                                     | P0819899 | P0859495  |
| Norstar Voice Mail User Guide - French                                      | P0819905 | P0859496  |
| Norstar Voice Mail Maintenance Manual - English                             | P0745015 | P0857707  |
| Norstar Voice Mail Maintenance Manual - French                              | P0745016 | P0857708  |
| Norstar Voice Mail End User Documentation Kit (Spanish)                     | A0646159 | A0667415  |
| Convenience Card - Spanish (10 sheets of 4)                                 | P0830320 | No change |
| Norstar Voice Mail User Guide - Spanish (40 included)                       | P0830319 | P0859497  |
| Norstar Voice Mail Documentation Kit for Training - English (consisting of) | A0642911 | A0666013  |
| Norstar Voice Mail Set Up and Operation Guide - English                     | P0819894 | P0857695  |
| Reference Guide - English                                                   | P0819895 | P0857696  |
| Norstar Voice Mail Programming Record - English                             | P0819898 | P0857698  |
| Convenience Card - English (1 sheet of 4)                                   | P0819896 | No change |
| Norstar Voice Mail Installation Guide - English                             | P0819897 | P0857697  |
| Norstar Voice Mail User Guide - English (1 included)                        | P0819899 | P0859495  |
| Norstar Voice Mail Documentation Kit for Training - French (consisting of)  | A0642918 | A0666014  |
| Norstar Voice Mail Set Up and Operation Guide - French                      | P0819900 | P0857699  |
| Reference Guide - French                                                    | P0819901 | P0857700  |
| Norstar Voice Mail Programming Record - French                              | P0819904 | P0857702  |
| Convenience Card - French (1 sheet of 4)                                    | P0819902 | No change |
| Norstar Voice Mail Installation Guide - French                              | P0819903 | P0857701  |
| Norstar Voice Mail User Guide - French (1 included)                         | P0819905 | P0859496  |
| Fax Messaging Documentation Kit (English) consisting of                     | A0617029 | A0666016  |
| Fax Setup and Ops Guide - English                                           | P0745028 | P0857703  |
| Fax Installation Guide - English                                            | P0745030 | P0865366  |
| Fax User Guide - English (40 are included)                                  | P0745034 | P0857704  |
| Fax Messaging Documentation Kit (French) consisting of                      | A0617030 | A0666015  |
| Fax Setup and Ops Guide - French                                            | P0745029 | P0857705  |
| Fax Installation Guide - French                                             | P0745031 | P0865366  |
| Fax User Guide - French (40 are included)                                   | P0745035 | P0857706  |
| Fax Messaging User Guide - Spanish                                          | P0745036 | P0857709  |

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**NORTEL**  
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☐ Companion ☐ Magellan ☐ Meridian 1 ☐ Norstar

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Switching:

☐ North America

☐ International

Transmission:

☐ ANSI

☐ ETSI

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**NORTEL**  
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## “Boletines de Marketing” Cambio de Dirección y Comentarios

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Por favor especifique el producto:

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☐ Por favor marque  
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☐ Telsets

Conmutación:

☐ Norte América

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Nombre:

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Comentarios:

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